

UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF RHODE ISLAND

UNILOC U.S.A., INC. and  
UNILOC SINGAPORE PRIVATE LIMITED,

Plaintiffs,

v.

MICROSOFT CORPORATION,

Defendant.

Civil Action No. 03-CV-440 (WES)

**MEMORANDUM IN SUPPORT OF MICROSOFT CORPORATION'S MOTIONS FOR  
JUDGMENT AS A MATTER OF LAW, NEW TRIAL, OR REMITTITUR**

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## I. INTRODUCTION

Uniloc's lawyers treated the evidence in this case like a proverbial "nose of wax," arguing whatever was convenient on any given issue at any given moment, notwithstanding consistency or accuracy. As a result, the jury was confused and found huge liability where none exists. Indeed, the jury awarded one of the largest patent verdicts ever – \$388 *million* – even though Uniloc's own copy protection product had been shown utterly ineffective, Uniloc had failed in its efforts to market or license that technology, and Uniloc's entire value (including its patent) had been calculated at just \$5 million.

From start to finish, Uniloc's strategy has been to exploit the popular animus against big companies generally, and Microsoft specifically. This case was not decided on the basis of the evidence, and what that evidence showed about the issues of infringement, validity, and damages. It was decided instead on the basis of inflammatory, unsupported, and internally inconsistent "black hat" rhetoric and innuendo about nonexistent copying. *That* was Uniloc's case. And it worked. Even though the Chief Judge of the Federal Circuit concluded that Microsoft did not infringe any claim of Uniloc's patent, and even though Uniloc itself was jettisoning theories and claims down to the very last minute, the jury branded Microsoft a *willful* infringer. There is no question that Uniloc's ceaseless rhetoric and innuendo infected the entire process. Unduly inflamed by baseless suggestions of copying, intrigue and cover-up, the jury followed rhetoric rather than analysis, both on technical issues as well as on damages, to render a verdict for Uniloc after brief deliberation.

The specific flaws and errors in this verdict are numerous, and extend to every facet of infringement, invalidity, and damages. With regard to infringement:

- The jury found that Microsoft's license digests were "associated" with licensees, even though the undisputed evidence showed that Microsoft's privacy technology actually

- makes it *impossible* for anyone to derive the identity of a licensee from a license digest. The license digest is simply not associated with a person, in any way.
- The jury found that Microsoft's accused MD5 and SHA-1 hash routines are the same as or equivalent to the patent's summation algorithm or summer, even though (1) the undisputed evidence showed that Microsoft's hashes operate in a fundamentally different way to produce a fundamentally different result than mere summation; (2) Uniloc's expert did not offer an opinion of equivalence, and (3) Uniloc's own corporate spokesman on this very issue testified under oath that they are not the same or equivalent.
  - The jury found that Product Activation met the claimed "registration" system requirement, even though Uniloc's evidence consisted of nothing more than highlighting out-of-context words in Microsoft documents, while ignoring the substance of the Court's claim construction. Again on the undisputed record, it is clear as a matter of contract law (a legal issue) that Microsoft's customers become licensed under the EULA *before* activation – unlike the patent, which contemplates selling licenses to users who tried software before buying.
  - The jury likewise found that Product Activation met the claimed "use mode" and "mode switching means" requirements, even though it is clear, again as a matter of contractual interpretation and the undisputed record, that a customer's use of the accused products before activation *is* "full use of the digital data or software *in accordance with the license*," which precludes a finding of infringement.
  - After abandoning indirect infringement, Uniloc failed to prove that Microsoft itself directly infringed by assembling or using all elements of the claimed system.

In addition, Uniloc failed to rebut Microsoft's invalidity case, which demonstrated that claim 19 is not valid if Uniloc's infringement arguments are accepted. Stanford Professor Martin Hellman demonstrated that his prior art patent contains all the features of the accused Microsoft products. The law is clear: that which infringes, if after, anticipates, if before.

Having failed to establish liability, Uniloc next grossly inflated its damages by presenting an Entire Market Value rule analysis in violation of its clear representation to the court that it would not do so, and without any proof that the Entire Market Value rule is applicable. It did so by presenting calculations that made its requested royalty look "reasonable" when compared to the *entire* revenues of Microsoft's accused products and by ridiculing Microsoft's proposed damages as just 0.00003% of the *entire* revenues of these products – again distracting the jury from the merits by using large corporate revenue figures. Beyond these clear errors, Uniloc also inflated its damages by perfunctorily applying a 25% "rule of thumb" *without* any attempt to link it to the facts of this case, and by relying on a \$10 per unit figure that was taken out of context and is contrary to all record evidence.

This Court stands as a bulwark against this unsupported, and unsupportable, result. This Court should exercise its power, and its duty, to set aside the verdict. On several occasions, the Court stated that it would take up Microsoft's defenses on a Rule 50 motion. It should do so now, and enter judgment as a matter of law for Microsoft. In the alternative, it should grant a new trial or at a minimum remittitur under Rule 59.

## **II. LEGAL STANDARDS**

### **A. Judgment as a Matter of Law**

Judgment as a matter of law is appropriate under Rule 50 when "a party has been fully heard on an issue during a jury trial and the court finds that a reasonable jury would not have a legally sufficient evidentiary basis to find for the party on that issue." Fed. R. Civ. P. 50(a)(1);

see, e.g., *Old Town Canoe Co. v. Confluence Holdings Corp.*, 448 F.3d 1309, 1311 (Fed. Cir. 2006) (affirming judgment as a matter of law of non-infringement). In reviewing the record for purposes of a Rule 50 motion, a Court “may not take into consideration the credibility of witnesses, resolve conflicts in testimony, or in any other manner weigh the evidence.” *Alvarez-Fonseca v. Pepsi Cola of P.R. Bottling Co.*, 152 F.3d 17, 23 (1st Cir. 1998). A Court does “assume the veracity, however, of any admissions made and stipulations entered into by the party opposing the Rule 50 motion, as well as any evidence derived from disinterested witnesses that has not been contradicted or impeached.” *Id.* (citations omitted).

## **B. New Trial**

In deciding a motion for a new trial, in contrast to one for judgment as a matter of law, the district court has broad discretion to weigh the evidence. *MacQuarrie v. Howard Johnson Co.*, 877 F.2d 126, 132 (1st Cir. 1989) (“The trial judge, upon considering a motion for a new trial, may consider the credibility of the witnesses who had testified and, of course, will consider the weight of the evidence.”); *Jennings v. Pare*, 2008 WL 2202429, \*2 (D.R.I. 2008) (“In deciding whether to grant a motion for a new trial ‘a trial judge is free to weigh the evidence himself and need not view it in the light most favorable to the verdict winner.’ Consequently, ‘unlike judgment as a matter of law, a new trial may be granted even if there is substantial evidence supporting the jury’s verdict.’”) (quoting *DLC Mgmt. Corp. v. Town of Hyde Park*, 163 F.3d 124, 134 (2d Cir. 1998)) (internal citations omitted).

A new trial is appropriate under Rule 59 when the verdict “is against the clear weight of the evidence, or is based upon evidence which is false, or will result in a clear miscarriage of justice.” *Coffran v. Hitchcock Clinic, Inc.*, 683 F.2d 5, 6 (1st Cir. 1982).

Determination of a Rule 59 motion for a new trial is a procedural question not unique to patent law and, as such, is governed by the law of the First Circuit. *Immunoconcept, LLC v.*

*Fulbright & Jaworski, LLP*, 504 F.3d 1281, 1289 (Fed. Cir. 2007) (Federal Circuit uses the law of the regional circuit to review denial of a Rule 59 motion); *Univ. of W. Va. v. VanVoorhies*, 278 F.3d 1288, 1294 (Fed. Cir. 2002) (denial of a Rule 59 motion “is a purely procedural question not unique to patent law”).

### **C. Remittitur**

“Under the doctrine of remittitur, a court may condition the need for a new trial on the issue of damages on the prevailing party’s acceptance of a reduced sum of damages.” *Cahill v. TIG Premier Ins. Co.*, 47 F. Supp.2d 87, 89 (D. Mass. 1999). That reduced sum may be determined by the maximum non-excessive recovery that is supported by the evidence presented at trial. *See Huber v. JLG Indus, Inc.*, 344 F. Supp.2d 769 (D. Mass. 2003), *citing Koster v. Trans World Airlines, Inc.*, 181 F.3d 24, 36 (1st Cir. 1999). “The decision of whether to grant remittitur is discretionary.” *Chrabaszcz v. Johnston School Committee*, 474 F. Supp.2d 298, 312 (D.R.I. 2007).

## **III. ARGUMENT**

### **A. No Reasonable Jury, Applying the Correct Legal Standard, Could Have Found Copying or Willful Infringement**

Microsoft begins with the issues of copying and willful infringement because those issues pervaded the trial. Uniloc’s baseless, but nonetheless highly inflammatory, accusations of copying infected the entire verdict, and forced Microsoft to devote substantial time and attention to debunking Uniloc’s ceaseless efforts to impugn it and its witnesses. Concerned about exactly such unfair prejudice, and the inevitable distraction from the substance of the case, Microsoft appropriately sought to exclude these arguments, and the attendant pejorative evidence and insinuations, both before trial and after Uniloc’s case-in-chief. [D.I. 240, 343] At minimum, the Court should enter judgment as a matter of law of no willful infringement and no copying and,

given the pervasiveness of these two issues, order a new trial that gives Microsoft a fair opportunity to have a jury focus on the relevant evidence on liability and damages, untainted by Uniloc's unfounded "black hat" contentions.

**1. Uniloc Presented No Legally Sufficient Evidence of Copying**

Uniloc's theories of willfulness changed throughout trial, and its increasingly speculative claims of various types of copying by Microsoft unfairly prejudiced Microsoft's ability to obtain a fair hearing on the liability and damages issues. None of the evidence offered by Uniloc in support of these various theories was sufficient, alone or in combination, to support the jury's finding of willful infringement, or to show copying.

**(a) Theory I: Copying of 1993 Sample Provided to Microsoft**

In opening, Uniloc stated that it would show that Microsoft copied the Uniloc software that Microsoft evaluated in 1993. [Trial Tr., Day 1, 44-46] Not only did Uniloc fail to show that anything in Product Activation was copied from anything in the Uniloc sample, it failed to show even what the Uniloc sample was.

Uniloc did not present any evidence of the technical content of the Uniloc sample – *i.e.*, what it was and how it worked. Because Uniloc failed to show that the sample was an embodiment of asserted claim 19, its allegation that Microsoft copied the 1993 sample is irrelevant to the issues of willfulness and copying, as a matter of law. For example, in *Amazon.com, Inc. v. Barnesandnoble.com, Inc.*, the Federal Circuit held that "evidence of copying Amazon's '1-Click®' feature is legally irrelevant unless the '1-Click®' feature is shown to be an embodiment of the claims." 239 F.3d 1343, 1366 (Fed. Cir. 2001) (obviousness context). Likewise, the court in *Leapfrog Enterprises, Inc. v. Fisher-Price, Inc.* granted defendant's motion *in limine* to exclude evidence of alleged copying of plaintiff's product where plaintiff could only provide attorney argument, but no evidence, that the product in question was

an embodiment of the asserted claim. 2005 WL 1331216. \* 2 (D. Del. June 6, 2005) (holding, in the willfulness context, that evidence of copying would be a “waste of time” where plaintiff could not show any evidence that its product embodies the “ideas or design” of the asserted claim).

Uniloc’s only response has been to point to the statement in the Microsoft/Uniloc NDA that “[c]ertain elements of the Concept are the subject of a Patent Application.” [PX-366; Trial Tr., Day 10, 34:21-24)] This vague reference does nothing to establish the technical content of the sample. First, Uniloc did not even show that the referenced patent application is the one that resulted in the ‘216 patent. Second, “[t]o willfully infringe a patent, the patent must exist and one must have knowledge of it. A ‘patent pending’ notice gives no knowledge whatsoever.” *State Indus., Inc. v. A.O. Smith Corp.*, 751 F.2d 1226, 1236 (Fed. Cir. 1985). Finally, and most importantly, Microsoft has been adjudged not to infringe 18 of the 20 claims of the ‘216 patent, and Uniloc has stipulated to the non-infringement of one of the two remaining claims. Yet Uniloc failed to provide any evidence that the sample embodied any elements of the single remaining *asserted claim 19*, as opposed to “certain elements” of the entire “patent application.”

Nor did Uniloc present any evidence that Microsoft copied anything from Uniloc’s sample. At closing argument, Uniloc offered only bare speculation that Mr. Pearce got the idea for combining the Product ID and Hardware ID from unspecified “information” available from the Uniloc sample that to this day remains a featureless black box: “[T]his didn’t just fall out of the sky for Pearce. He got the idea from us. The dates are too close there and the fact that our information is already in Redmond readily available to him.” [Trial Tr., Day 10, 37:3-6] What “dates are too close?” The Uniloc sample was provided to Microsoft in 1993. [Ex. T-6] Mr. Pearce’s notebook entry reflecting the combination of a product ID and a hardware ID is dated in

July of 1996. [Ex. O-2, p. 477] Contrary to Uniloc's insinuation, there is no coincidence of dates. What evidence supported the "fact that our information is already in Redmond readily available to [Mr. Pearce]"? None. This too was wholesale fabrication by Uniloc's counsel.

The only evidence at trial relevant to this theory was (1) the fact that the Uniloc sample was a technical failure and Microsoft would not even consider using it for products of the kind accused, and (2) Mr. Pearce's uncontradicted testimony that he had never heard of Uniloc, Mr. Richardson, or the Uniloc patent or sample prior to the lawsuit. [Trial Tr., Day 5, 203:8-25; Day 9, 69:14-70:6]

Uniloc had no response to the first point. The undisputed record shows that Uniloc accused Microsoft of "copying" a technology Microsoft had evaluated and found to have "security [that] is minimal at best." [PX-133, p. 2]. Mr. Gledhill was "embarrassed" by these results [Trial Tr., Day 1, 162:15-163:2], and Mr. Petre likewise corroborated that Uniloc's technology "was easily broken." [*Id.*, 230:20-21] Even Uniloc itself at the time acknowledged its gaffe, and vowed internally to fix the problems to "regain credibility with Microsoft." [Ex. X-6; *see also* Ex. Q-6] This is the \$388 million technology that Microsoft allegedly resurrected three years later to safeguard its flagship products? The suggestion is ludicrous, and no reasonable jury could have believed it.

As to the second point, Mr. Pearce's testimony was not only uncontradicted, it was corroborated by his notebooks covering his entire time as Program Manager for the initial Product Activation precursors. Those notebooks do not mention Uniloc, Mr. Richardson, or the Uniloc patent or sample. [Exs. O-2, R-9, and S-9]. Nevertheless, not wanting the facts to get in the way of a good story, during the first cross-examination of Mr. Pearce, Uniloc's counsel repeatedly and falsely represented to the jury that Microsoft and Mr. Pearce had failed to produce

other notebooks from the relevant time frame. [Trial Tr., Day 5, 237:22-24; 238:3-5; 239:3-5] Though it should never have been put to the task, Microsoft debunked this nonsense during Mr. Pearce's second examination, when Mr. Pearce conclusively established that Microsoft had in fact produced his notebooks spanning the entire time period at issue, and that none of them mentioned Uniloc, Mr. Richardson, or the Uniloc patent or sample. [Trial Tr., Day 9, pp. 68:12-72:2; 75:20-77:11]

**(b) Theory II: Pearce Copied from the '216 Patent**

During cross-examination of Mr. Pearce and in closing argument, Uniloc's counsel advanced an entirely new theory of willfulness, never previously disclosed to Microsoft, never identified in Uniloc's pretrial memorandum, and not even foreshadowed in opening. The gravamen of this theory is that the '216 patent became available to the general public over the Internet as of February 1996, and so Mr. Pearce must have copied from the patent because his job was "competitive intelligence," and the idea of combining a Product ID and a Hardware ID did not appear in his notebook until five months later. [See, e.g., Trial Tr., Day 10, 118:4-12 ]

This too is unadulterated attorney argument. There is absolutely no evidence to support Mr. Hayes' repeated representations that Mr. Pearce could have accessed the '216 patent within "seconds" or "milliseconds" as of February 1996. [See, e.g., Trial Tr., Day 5, 233:9-14; Trial Tr., Day 10, 36:12-37:6; Trial Tr., Day 10, 117:23-118:10] Uniloc did not show that its patent – or any patents for that matter – were available to, let alone accessed by, Mr. Pearce over the Internet in 1996. The only *evidence* on this theory is the uncontradicted testimony and corroborating notebooks of Mr. Pearce cited above, along with Mr. Pearce's uncontradicted testimony that he never performed or requested a patent search. (Trial Tr., Day 5, 233:2-14).<sup>1</sup>

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<sup>1</sup> In fact, according to a USPTO press release, the USPTO made patents available on the Internet in 1998. (United States Patent and Trademark Office Press Release, *available at* <http://www.uspto.gov/web/offices/com/speeches/04->

**(c) Theory III: Microsoft Knew of, and Possibly Copied, the ‘216 Patent Based on Prosecution of the Larsson Patent**

Uniloc offered into evidence at trial U.S. Patent No. 6,226,747 (“the ‘747 patent”), assigned to Microsoft, which issued in 2001 [PX-465], along with the prosecution history of that patent [PX-466]. Although Microsoft disclosed that the ‘216 patent was cited in the prosecution history of that patent early in discovery, Uniloc never pursued any related discovery, and never contended prior to trial that the ‘747 patent constituted evidence of willfulness. Nonetheless, that is exactly what Uniloc’s counsel alleged to the jury for the first time in his closing argument:

PX-465 just happens to be, and we introduced the file history also, the Larsson patent assigned to Microsoft. You see that. And Larsson, as Pearce said, is an individual he knew. The Larsson patent issued in 2001, right about the time that they launched the product in the United States. And what the patent does this show that Microsoft knew of at that time? None other than the Richardson patent. Right there. Plain as day. They knew of the Richardson patent before they launched the program.

[Trial Tr., Day 10, 38:2-11]

The reference to Mr. Pearce knowing Mr. Larsson was yet another baseless theory of copying. This one does not withstand even modest scrutiny, given that Mr. Pearce had done his work, and the three Product Activation pilot studies had been performed, before citation of the ‘216 patent in the Larsson application had even occurred.

Specifically, PX-466 shows that the ‘216 patent was cited in a document mailed to Microsoft’s outside patent counsel on July 14, 1999. [PX-466, pp. UNILOC 86899 and 86905] This was three years *after* the date of Mr. Pearce’s notebook entry documenting his idea of combining a Product ID and Hardware ID, in what became Product Activation. [Ex. O-2, p. MS-U 477] Moreover, the undisputed evidence at trial established that the development work on the three Product Activation pilots Mr. Pearce

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13.htm). In any event, Uniloc’s “internet” theory of willfulness proves too much. All patents are accessible via the internet today, and so on Uniloc’s theory, every accused infringer would be presumed to have copied. This cannot be reconciled either with *Seagate*, or the requirement that the patentee prove willfulness by clear and convincing evidence. *In re Seagate Tech. LLC*, 497 F.3d 1360, 1371 (Fed. Cir. 2007).

participated in was complete before the '216 patent was cited. [PX-239, p. MS-U 172396 (stating that Office Activation Wizard Pilot was “in 7 Countries since June 1999”); Hughes Testimony, Trial Tr., Day 4, 49:8-10, 49:25-50:5 (stating that he began working on Product Activation for Office XP as soon as he joined Microsoft as an employee in November 1999, after working on the three pilots)] In fact, when it suited its purposes elsewhere – most notably, when it sought to use documents characterizing the pilots as “registration” systems – Uniloc itself emphasized that the pilots were in substance the same thing as Product Activation. [See, e.g., Trial Tr., Day 4, pp. 200-204 and 146:8-16] This is one of many fundamental inconsistencies in Uniloc’s various and shifting theories of the case which justifies the relief Microsoft seeks by this motion. None of Uniloc’s copying theories and alleged evidence in support comes close to meeting the clear and convincing standard.

## **2. Uniloc Presented No Legally Sufficient Evidence of Willful Infringement**

To prove that Microsoft willfully infringed its '216 patent, Uniloc was required to show by clear and convincing evidence both “that the infringer acted despite an objectively high likelihood that its actions constituted infringement of a valid patent” and “that this objectively-defined risk (determined by the record developed in the infringement proceeding) was either known or so obvious that it should have been known to the accused infringer.” *In re Seagate Tech. LLC*, 497 F.3d 1360, 1371 (Fed. Cir. 2007). The evidence that was actually relevant to willfulness, as opposed to Uniloc’s irrelevant, baseless, and inconsistent copying allegations, fell far short of meeting this standard.

*Seagate* states that the objectively-defined risk of infringement is “determined by the record developed in the infringement proceeding.” *In re Seagate*, 497 F.3d at 1371. Uniloc

failed to prove that Microsoft acted with objective recklessness; to the contrary, although it is not Microsoft's burden to disprove willfulness, it nonetheless has conclusively shown that it at all times has been objectively reasonable, and its defenses objectively well-founded. This Court's grant of summary judgment of non-infringement of all claims and all accused products in October 2007 [PX-1101 ¶ 1] alone precludes a finding of willfulness, even though it was later reversed in part by the Federal Circuit:

The infringement analysis in the first summary judgment decision goes to the objective inquiry of the likelihood of infringement. Regardless of the contrary decision of the Appeals Court, the analysis establishes defendants' conduct in selling its product was not reckless in the sense that there was an 'objectively high likelihood' that its actions were infringement. Given the significant support in the language of the patent, the specification and prosecution history for defendant's non-infringement position, plaintiff cannot meet its burden to prove objective recklessness by clear and convincing evidence.

*Franklin Electric Co. v. Dover Corp.*, 2007 WL 5067678, \*8 (W.D. Wis Nov. 15, 2007).<sup>2</sup>

Indeed, Chief Judge Michel would have affirmed the grant of summary judgment. The fact that the Chief Judge of the Federal Circuit agreed with Microsoft is the antithesis of the requisite "objectively high likelihood that [Microsoft's] actions constituted infringement of a valid patent:"

Although some may disagree, I think it clear that the '216 patent requires the 'licensee unique ID' to be generated from inputs including at least one item of personal information. Because it is undisputed that Microsoft's license digests are generated from information about the user's computer and the purchased software, and not from information that personally identifies the user, I would affirm the grant of summary judgment on this alternative ground (at least as to the absence of literal infringement).

*Uniloc USA, Inc. v. Microsoft Corp.*, 290 Fed. Appx. 337, 344-45 (Fed. Cir. 2008). In other words, Chief Judge Michel in dissent agreed with Microsoft's claim construction for "licensee

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<sup>2</sup> Microsoft made the same argument in its motion *in limine* to preclude evidence of willful infringement. [D.I. 240] This Court denied Microsoft's motion, treating it as "in essence" a motion for summary judgment, and stated that "if appropriate, Microsoft may renew its argument in the form of a Rule 50 motion." [Order on Motions in Limine and Trial Management Issues, D.I. 322, p. 22]

unique ID,” under which there was plainly no infringement. This dissent shows that Microsoft’s construction was reasonable, and consequently Microsoft’s infringement was not willful.

*Cohesive Techs., Inc. v. Waters Corp.*, 543 F.3d 1351, 1374 (Fed. Cir. 2008) (affirming finding of no willful infringement after concluding that asserted claims were subject to a “reasonable interpretation” under which the accused products would not infringe).

Uniloc’s argument that Microsoft “knew” that summary judgment would be reversed is more unsupported attorney argument, and is also ridiculous on its face in light of Chief Judge Michel’s dissent. In addition to Microsoft’s position on the claim construction issue with which the Chief Judge agreed, Microsoft also vigorously defended the grant of summary judgment on the Court’s construction of “Licensee Unique ID,” *i.e.*, a “unique identifier associated with a licensee.” Uniloc’s expert Klausner had not even claimed at that stage that the license digest was “associated with” a user. [D.I. No. 156, Ex. A, Expert Report of David Klausner, Ex. D at pp. 84 and 233 (providing no opinion that the license digest is a “unique identifier associated with the licensee” in the context of analysis of claim 12 or claim 19)] Moreover, Microsoft understood (and later explained to the Federal Circuit) that the Court’s Summary Judgment Order had *rejected* the license digest as a potential “licensee unique ID.” [PX 1101, Opinion and Order granting Summary Judgment, p. 23 (“the values generated on the client that might be considered licensee unique IDs (the Product ID and/or the Hardware ID), and the values that might be considered licensee unique IDs generated on the server (the “license”), are computed by different algorithms and do not match”); *Uniloc, U.S.A., et al. v. Microsoft Corp.*, Brief of Appellant Microsoft Corp., 2008 WL 1771304 at \*26 (March 19, 2008)]

Uniloc’s attempt now to capitalize on Microsoft’s concession to the Federal Circuit that this Court made a “small error” on the issue of whether the client and server used the same hash

algorithm ignores all of this – and also begs the question of why Uniloc itself failed to bring that error to this Court’s attention after summary judgment was granted. [Federal Circuit transcript at 7-11] Microsoft’s appeal did not hide, or seek to rely on, that error. That error was simply irrelevant to the arguments that Microsoft made in support of summary judgment. Uniloc’s accusation in closing that Microsoft intentionally delayed pointing out the “error” so it could continue willful infringement suffers from the same defect, and is yet another example of a baseless charge used to inflame the jury against Microsoft.

Post-*Seagate* law is also clear that “legitimate defenses to infringement claims and credible invalidity arguments demonstrate the lack of an objectively high likelihood that a party took actions constituting infringement of a valid patent.” *Black & Decker, Inc. v. Bosch Tool Corp.*, 2008 WL 60501, at \*6-7 (Fed. Cir. Jan. 7, 2008) (unpublished opinion). Here, as detailed below, Microsoft should win this case as a matter of law; its defenses are “legitimate.”<sup>3</sup>

**3. Remedy: The Court Should Enter JMOL of No Copying and No Willful Infringement, and at a Minimum Order a New Trial**

Since Uniloc’s evidence of both copying and willful infringement is legally deficient, the Court should enter judgment as a matter of law so holding. In addition, since Uniloc’s baseless and inflammatory allegations of copying unfairly prejudiced Microsoft’s ability across the board to get a fair hearing on the liability and damages issues, and forced it to devote substantial time

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<sup>3</sup> In this regard, it is notable that although Uniloc has accused Microsoft of willful infringement since day one of this lawsuit, those allegations have never distinguished in any way between or among any of the claims of the patent. In other words, Uniloc made the same willful infringement allegations for claim 20 – which Microsoft is adjudged not to infringe – as for the nearly identical claim 19. It is simply, and logically, impossible for Microsoft to be a willful infringer of claim 19 when as a matter of *res judicata* it is not an infringer of claim 20. The fact that Uniloc’s infringement allegations have contracted so significantly over the course of the litigation thus further disproves its claim that Microsoft recklessly disregarded an objectively high risk of infringement. A case that at one point included claims of direct and indirect infringement of fourteen claims based on eight distinct theories resulted in an unappealed judgment of non-infringement of twelve claims, one claim dropped on the eve of trial, all indirect infringement claims dropped on the eve of closing arguments, and only an allegation of direct infringement of a single claim under a single theory remaining. [PX-1101; D.I. 365]

and attention to defending against these accusations instead of the issues of substance, the Court should at least order a new trial if it does not resolve the entire case in Microsoft's favor.

The potentially prejudicial effect of evidence of copying in a patent trial is well-recognized. *Eolas Techs., Inc. v. Microsoft Corp.*, 270 F. Supp. 2d 997 (N.D. Ill. 2003) (granting defendant's motion *in limine* to exclude evidence of copying where willfulness had been eliminated from the case and noting "the highly prejudicial nature of the evidence"); *see also Aptargroup, Inc. v. Owens-Illinois, Inc.*, 2003 WL 21557632 (N.D. Ill., July 3, 2003) (bifurcating liability and willfulness and stating "we think there is a basis for believing that an 'intent' issue mixed up with an infringement issue will have a tendency to confuse and possibly prejudice the jury, without any real relevant evidence benefit.").

The unfair prejudice to Microsoft was compounded here by the inflammatory rhetoric of Uniloc's counsel. [*E.g.*, Trial Tr., Day 10, 117:19-118:10, 36:12-37:6; 39:14-20; Trial Tr., Day 5, 233:9-14; 237:21-238:5] As demonstrated by the verdict and outlandish damage award, the jury was swayed by Uniloc's improper tactics. For this reason, the Court should at a minimum order a new trial.<sup>4</sup>

**B. No Reasonable Jury, Applying the Correct Legal Standard, Could Have Found Infringement**

For at least four independent reasons, the jury's infringement verdict is legally unsupportable: (1) Uniloc failed to establish that the license digest is a unique identifier "associated with a licensee;" (2) Uniloc failed to establish that the one-way cryptographic hashing functions that generate the license digests are the same as or equivalent to a summation

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<sup>4</sup> Prior to trial, Microsoft moved *in limine* to exclude alleged evidence of copying on the grounds that such evidence would not be sufficient to prove either willfulness (D.I. 240) or nonobviousness (D.I. 236) and would create an undue risk of juror confusion and prejudice. The Court denied those motions, stating wholesale exclusion of this evidence would be premature. (D.I. 322, pp. 21, 22). Having seen the mischief Uniloc caused with these allegations, the Court should at least order a new trial and exclude them. Microsoft preserves its position that denial of its motions *in limine* on copying was prejudicial error that entitles Microsoft to a new trial.

algorithm; (3) Uniloc failed to establish that the accused products include the required “registration system,” “use mode,” and “mode switching means;” and (4) Uniloc failed to establish that Microsoft makes, uses, sells, offers to sell, or imports the entire, complete system recited in claim 19.

**1. Uniloc Failed to Establish that the License Digest Is a Unique Identifier “Associated with a Licensee” Where Any Possible Association Between the Typed-In Product Key and the Accused License Digest is Deliberately Destroyed, and Where Uniloc Otherwise Failed to Sustain Its Burden of Proof**

There are no fact disputes about how Microsoft’s accused products operate. Instead, the issue is one of law – what the asserted claim requires.

The Court has construed “licensee unique ID” to mean “a unique identifier associated with a licensee.” [Trial Tr., Day 10, 136:25-137:2] Uniloc asserted at trial that Microsoft’s license digest is the licensee unique ID. [Klausner Testimony, Trial Tr., Day 3, 140:12-19] Yet there is no evidence from which a reasonable jury could have concluded that the license digest is a unique identifier associated with a licensee. Indeed, it is undisputed that a license digest does not tell you *anything* about the information used to create it. [*E.g.*, Hughes Testimony, Trial Tr., Day 4, 192:12-18 (use of one-way hash protects user’s privacy because irreversible); Klausner Testimony, Trial Tr., Day 3, p. 188:8-13 (agreeing that it is impossible to determine inputs from output of one-way hash)]

Microsoft recognizes that this Court has held, and the Federal Circuit has affirmed, that a licensee unique ID does not have to be generated from a user name or the like. [D.I. No. 145, pp. 19-21; PX-12, p.9] Nonetheless, the construction requires that it be more than just a unique number; it must also be an *identifier* and be “associated with a licensee.” [D.I. No. 145, p. 9; PX-12, p. 12] This is consistent with the ‘216 patent’s disclosure of the patented system creating an associative link between user and software: “The registration code portion 38 allows a unique

link to be made between the digital data 37 and an individual authorized or licensed to use the digital data 37 by way of initial execution of a copy of the digital data comprising registration code portion 38.” [PX-1, 10:58-62] Uniloc presented no evidence to establish that the accused license digest is both an identifier and associated with a user. To the contrary, it is undisputed that there is no way to determine from the license digest what Product Key was typed in by the user. [Klausner Testimony, Trial Tr., Day 3, p. 188:8-13; Hughes Testimony, Trial Tr., Day 4, p. 89:3-11; Wallach Testimony, Trial Tr., Day 7, p. 136:15-21] Accordingly, even if one of the inputs to the one-way hash algorithm were a unique identifier associated with the licensee—which Microsoft strongly disputes—the accused *license digest* coming out of that algorithm is not an identifier, and is not associated with the licensee because it is impossible to determine from it what those inputs were.<sup>5</sup>

Uniloc instead built its infringement case around the Product Key – which is used to create a part of one of the *inputs* to the algorithm (the PID), whereas the claimed licensee unique ID aspect of the claim concerns the *output* of the algorithm. Not only is Uniloc looking at the wrong side of the equation, but the Product Key is plainly also not associated with a particular licensee, and is instead if anything associated only with the particular purchased copy of the software that it came with in the box. It is undisputed (a) that the licensee must be a person [Klausner Testimony, Trial Tr., Day 3, p. 165:17-21] and (b) that *more than one person* can use the same Product Key to install an accused product on multiple computers in violation of Microsoft’s EULA [Trial Tr., Day 8 at 109; Day 6 at 48]. For example, since an Office Product Key can be used twice, a user can give a copy to a friend, so that two people end up activating Office with the same Product Key on different computers. [Trial Tr. Day 8 at 109] Likewise,

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<sup>5</sup> It is also undisputed that Microsoft does not store the license digest; the Clearinghouse throws it away after sending the license to the user’s computer. [See, e.g., Wallach Testimony, Trial Tr. Day 7 at 135:02-135:12; Hughes Testimony, Trial Tr., Day 4, 93:17-94:5, 96:9-16; Klausner Testimony, Trial Tr., Day 3, 188:19-189:3]

since a Windows Product Key can be reused every 120 days, several (or even numerous) people can end up activating Windows with the same Product Key on different computers. [Trial Tr. Day 6 at 48; Trial Tr. Day 8 at 109]

Beyond these fundamental differences between the patent and the accused products, not a single one of the much-touted “contemporaneous Microsoft documents” cited by Uniloc says anything at all about the license digest, let alone suggests that the license digest is a unique identifier associated with a licensee.<sup>6</sup>

In addition, the sole evidence proffered by Uniloc on the issue of whether the license digest is a “unique identifier associated with a licensee” is Mr. Klausner’s opinion testimony. That testimony was not only conclusory, it was contradicted by the factual evidence and is therefore insufficient to support the jury’s verdict. “When an expert opinion is not supported by sufficient facts to validate it in the eyes of the law, or when indisputable record facts contradict or otherwise render the opinion unreasonable, it cannot support a jury’s verdict.” *Brooke Group Ltd. v. Brown & Williamson Tobacco Corp.*, 509 U.S. 209, 242 (1993). Similarly, when a liability expert’s opinion testimony is contradicted by his own factual testimony, that opinion should not be accepted in deciding whether substantial evidence supports a jury’s finding of infringement. *Johns Hopkins University v. Datascop Corp.*, 543 F.3d 1342, 1349 (Fed. Cir. 2008) (rejecting expert’s opinion that a particular limitation of a claim was met by the accused product as at odds with his factual testimony and reversing district court’s denial of motion for judgment as a matter of law of no infringement).

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<sup>6</sup> Mr. Klausner testified that he reviewed PX-250, PX-246, PX-254 and PX-129 in forming his opinion that the license digest in Microsoft’s Product Activation is a licensee unique ID. [Trial Tr., Day 3, pp. 66-71] Uniloc additionally introduced PX-234, PX-256 and PX-255 during its cross examination of Dr. Wallach as ostensible support of its position that Microsoft’s products infringe this element of Claim 19. [Trial Tr., Day 8, pp. 20, 23-25, and 29-30] Uniloc also mentioned PX-26 in closing argument as a Microsoft document alleged to support this argument. [Trial Tr., Day 10, 9:12-20] *None* of these eight documents mentions the license digest.

Mr. Klausner's opinion testimony that Microsoft's license digest is a licensee unique ID suffers from both types of defects. His opinion is premised entirely on his bare and unsupported assertion that "the Product Key was associated with the user because they typed it in." [Klausner Testimony, Trial Tr., Day 3, p. 24:15-16] Because the Product Key is used to create a PID, he further opined, "the PID is also associated with the user because it is also unique." [*Id.* at 24:18-20; *see also id.* at 42:6-14] In other words, Mr. Klausner's opinion that the license digest is a unique identifier associated with a licensee rests entirely on his conclusory assertion that a portion (roughly half) of one of the inputs (the PID) to the one-way hash algorithm that generates the license digest in turn comes from a unique identifier (the Product Key), which in turn is allegedly associated with the licensee only because Mr. Klausner says so.

Uniloc provided no factual underpinning for Mr. Klausner's flawed predicate that the Product Key is associated with a user merely because the user typed it in, at a point in time at which the user is not yet even a licensee. As the Court observed, "it can't be associated with just simply by the statement of the witness that it is associated with." [Trial Tr., Day 3, 153:21-23]. Nor is Mr. Klausner's bare assertion supported by the patent. The patent does not say that a licensee unique ID is associated with a licensee because the licensee types something in that is later used in generating the licensee unique ID. [PX-1, the '216 patent] Instead, the patent discloses *an associative link* created by the registration code, as discussed at the beginning of this section. [*Id.*, 10:58-62] Uniloc presented no evidence, through Mr. Klausner or otherwise, that the accused Microsoft Product Activation code creates an associative link between the license digest, or any of its inputs, and the licensee. Because Mr. Klausner's conclusory opinion that the license digest is a licensee unique ID lacks a basis in fact, it should be disregarded. *Brooke Group*, 509 U.S. at 242; *see also Weschler v. Macke Int'l Trade, Inc.*, 486 F.3d 1286, 1294 (Fed.

Cir. 2007) (disregarding an expert's unfounded opinion in reversing denial of motion for judgment as a matter of law).

In addition, Mr. Klausner's own admissions in the context of analyzing the prior art undermine and contradict his opinion that the license digest in Microsoft's accused products is a licensee unique ID, independently rendering that opinion insufficient to support the jury's verdict. He admitted that "any result of a hash function utilizing a random number would be random, rather than a licensee unique ID." [Klausner Testimony, Trial Tr., Day 3, p. 207:8-15] It is undisputed that one of the inputs to both the MD5 and the SHA-1 hash functions that generate the license digest is a Product ID ("PID") that incorporates a random number. [*Id.* at 196:23-197:6; Hughes Testimony, Trial Tr., Day 4, pp. 86:23-87:2; Wallach Testimony, Trial Tr., Day 7, p. 131:3-6] Thus, the license digest cannot be a licensee unique ID, by Klausner's own admission. The contradiction between Mr. Klausner's testimony that "any result of a hash function utilizing a random number would be random, rather than a licensee unique ID" in the context of the prior art and his testimony in the context of infringement that the license digest, which is likewise generated from a hash function utilizing a random number, is a licensee unique ID, makes Mr. Klausner's testimony the kind of incredible opinion testimony that should not be accepted in deciding whether sufficient evidence supports the jury's verdict of infringement.

*Johns Hopkins*, 543 F.3d at 1349.<sup>7</sup>

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<sup>7</sup> The undisputed evidence also shows that a given Product Key does not result in one unique license digest or even one unique Product ID. Uniloc's and Microsoft's experts agree that, because the PID contains a random component, any given Product Key can generate multiple PIDs. [Wallach Testimony, Trial Tr., Day 7, p. 131:13-16 ("There's actually a large number of different PIDs for every single product key."); Klausner Testimony, Trial Tr., Day 3, p. 196:23-197:6 (agreeing that statement "with every reinstall using the same Product Key, you will get a different PID, *i.e.*, the random digits will change. The odds that you would reinstall and get the exact same set of random digits are very, very low" is true)] Uniloc also offered no evidence contradicting Dr. Wallach's testimony that many distinct license digests can be derived using the same PID. [Wallach Testimony, Trial Tr., Day 7, p. 139:18-140:10] There is no evidence that these multiple digests or multiple PIDs are uniquely associated with either the Product Key entered by the user or the user herself. Thus, substantial evidence does not support the jury's finding that license digests are unique identifiers associated with the licensee.

The documents on which Uniloc relies also fail to meet its burden of showing that the license digest is a licensee unique ID. As discussed above, none of the documents even references the license digest. Nor does any of these documents say that the Product ID (“PID”) is a unique identifier associated with a licensee, contrary to the representation of Uniloc’s counsel in closing. [Trial Tr., Day 10, 9:17-20 (“And there’s a dozen of them all say a PID is a unique identifier associated with a licensee to any regular human being reading them, which you can read them with your common sense.”)] The documents do no more than show association of the *PID* with a *license*, which is not the same as an association of the *license digest* with the *licensee*. Thus, the jury’s infringement verdict is unsupportable.

Finally, Uniloc failed to present any evidence from which a reasonable jury could conclude that Microsoft’s Product Activation meets the “licensee unique ID” limitation under the doctrine of equivalents. Uniloc offered no reasoned explanation of how a license digest that deliberately has no association with a user could be equivalent to a licensee unique ID that represents such an association.

In particular, Mr. Klausner did not provide any testimony establishing that the license digest is an equivalent of the licensee unique ID under the Court’s jury instruction. [See Trial Tr., Day 10, 128:17-129:10] He never even stated what the function, way, or result of the license digest is in Microsoft’s accused products, or how those aspects compare with the function, way or result of the claimed licensee unique ID. As with the rest of his treatment of the doctrine of equivalents, Mr. Klausner offered only conclusory testimony regarding the function, way and result of the “A remote registration station incorporating remote licensee unique ID generating means” element of claim 19. [Trial Tr., Day 3, 106:21-107:22] This is precisely the type of conclusory testimony that the Federal Circuit has repeatedly held to be insufficient to uphold a

jury verdict, or survive summary judgment. The patentee must present “particularized testimony and linking argument” to support a jury finding of infringement by equivalents. *Texas Instruments Inc. v. Cypress Semiconductor Corp.*, 90 F.3d 1558, 1566-67 (Fed. Cir. 1996) (affirming grant of judgment as a matter of law of no infringement under the doctrine of equivalents because the plaintiff’s expert had provided “merely generalized testimony” concerning equivalence); *see also Johns Hopkins University v. Datascope Corp.*, 543 F.3d 1342, 1349 n. 3 (Fed. Cir. 2008) (reversing denial of motion for judgment as a matter of law of non-infringement, holding that if the jury had based its finding on equivalency, “our conclusion would not change, as plaintiffs did not present the particularized testimony and linking argument necessary to support a jury finding of infringement on the basis of the doctrine of equivalents.”); *Stumbo v. Eastman Outdoors, Inc.*, 508 F.3d 1358, 1365 (Fed. Cir. 2007) (“We have repeatedly held that such cursory conclusions [of insubstantial differences under the doctrine of equivalents] will not withstand summary judgment.”) (collecting cases).

Mr. Klausner also failed to offer testimony that the differences between the licensee unique ID and the license digest are insubstantial or that the licensee unique ID and the license digest are interchangeable from the perspective of one of ordinary skill in the art. In fact, the evidence at trial all tended to establish that the license digest is *not* the equivalent of a licensee unique ID. Microsoft’s expert, Dr. Wallach, testified that Microsoft’s license digest is not equivalent to the licensee unique ID of claim 19 because “Microsoft has gone out of its way not to know who you are, not to require you to say anything about who you are in order to use its product. You bought the box, you can use the product.” [Trial Tr., Day 7, 141:15-18] This aspect of the design of Microsoft’s Product Activation system completely differs from the purpose of the licensee unique ID, according to Dr. Wallach. [*Id.*, 141:19-25] Dr. Wallach’s

opinion is amply supported by the trial record, including Mr. Hughes' testimony about the designing of Product Activation to avoid impinging on users' privacy [*see, e.g.*, Trial Tr., Day 4, 86:8-15; 90:6-91:10; 103:13-21] and Mr. Peiker's testimony to the same effect [*see, e.g.*, Trial Tr., Day 6, 51:7-53:2].

**2. Uniloc Failed to Establish that Hashing Is Equivalent to a Summation Algorithm Because It Compared Only Individual Pieces Rather Than Entire Structures, and Because It Has Not Patented All Algorithms That Use Addition**

To establish infringement, Uniloc also had to prove the presence of a "licensee unique ID generating means," which the Court construed under 35 U.S.C. § 112, ¶ 6. [Trial Tr. Day 10, 131:01-134:03; 139:03-140:12] For an accused device to literally infringe such a means-plus-function element, the accused device must (1) perform the identical function recited in the claim and (2) perform that function using structures the same as or equivalent to corresponding structures described in the patent specification. *Pennwalt Corp. v. Durand-Wayland, Inc.*, 833 F.2d 931, 934 (Fed. Cir. 1987) (en banc). Equivalence between structures for the purposes of § 112, ¶ 6 can be established by proving that the structure in the patent and the accused structure perform the identical function, in substantially the same way, with substantially the same result. *Odetics*, 185 F.3d at 1267.

Here, the Court construed the function as "[t]o generate a local or remote licensee unique ID" and the corresponding structure as "[a] summation algorithm or summer and equivalents thereof." [Trial Tr. Day 10, 139:03-140:12] This construction is drawn from the disclosure of the '216 patent:

The algorithm, in this embodiment, *combines by addition the serial number 50 with the software product name 64 and customer information 65 and previous user identification 22 to provide registration number 66.*

[‘216 Patent, PX-1, at 11:53-56 (emphasis added)] The same process is also shown in Figure 9 and described in the patent at 11:53-65, while the hardware analogue (a “summer”) is described at 12:58-13:10 and 13:31-13:36.<sup>8</sup> No structure other than the specified addition algorithm for the licensee unique ID generating means is discussed in the specification. Thus, the Court’s construction, in accordance with the patent, makes clear that the “summation algorithm” combines the inputs to the licensee unique ID generating means using simple addition operations.

**(a) Just Because MD5 and SHA-1 Use Some Addition Does Not Make Them Equivalent to a Summation Algorithm**

Uniloc’s infringement case is based on the premise that Microsoft’s accused MD5 and SHA-1 hashes are equivalent to the patent’s summation because these functions *use* addition. [See, e.g., Klausner Testimony, Trial Tr., Day 3, 32:01-32:11, 121:15-122:23, and 123:07-124:11; Trial Tr., Day 10, 12:23-14:23] Uniloc’s approach fails as a matter of law because equivalence must be evaluated in terms of *entire structures*, not pieces, and because it is the entire MD5 and SHA-1 algorithms that allegedly perform the function of generating the alleged licensee unique ID – the license digest. *Odetics, Inc. v. Storage Tech. Corp.*, 185 F.3d 1259, 1268 (Fed.Cir.1999) (“The individual components, if any, of an overall structure that corresponds to the claimed function are not claim limitations. Rather, the claim limitation is the overall structure corresponding to the claimed function. This is why structures with different numbers of parts may still be equivalent under § 112, ¶ 6, thereby meeting the claim limitation.”); see also *Cardiac Pacemakers, Inc. v. St. Jude Medical, Inc.*, 296 F.3d 1106, 1119 (Fed. Cir. 2002) (the “corresponding structure must include all structure that actually performs the recited function”).

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<sup>8</sup> Uniloc has never contended that the accused software hashes are the same as or equivalent to hardware “summers,” so this aspect of the corresponding structure is irrelevant for purposes of this case.

Here, the undisputed evidence establishes that Microsoft's MD5 and SHA-1 hashes operate in a fundamentally different way than summation, and produce a fundamentally different result, because they consist of not just addition, but also mixing and compressing. Compared to simply adding inputs together in a summation, they are vastly more complicated and sophisticated and produce a much more secure result, with important properties such as irreversibility that simple summation does not achieve. The Court itself noted that it is not "self-evident" that MD5 and SHA-1 are "summation" algorithms after the *voir dire* of Uniloc's expert, Mr. Klausner. [Trial Tr., Day 3, 4:25-5:09]

Once again, there are no disputes about how the accused products work. The issue is one of law – whether Uniloc has patented *all* algorithms that use *any* addition, and whether proof that MD5 and SHA-1 use *some* addition in the context of a far more complex algorithmic structure is sufficient proof of infringement. Since the answer is clearly no, Microsoft does not infringe as a matter of law. *See Mitutoyo Corp. v. Central Purchasing, LLC*, 499 F.3d 1284, 1289 (Fed. Cir. 2007) (affirming summary judgment of non-infringement where "the only question is whether the trial court properly applied the parties' stipulated claim construction for the "phase position identification" limitation to the undisputed facts of this case"); *C.R. Bard, Inc. v. M3 Systems, Inc.*, 157 F.3d 1340, 1360 (Fed. Cir. 1998) (reversing verdict and granting JMOL where it was "apparent that the jury either adopted M3's erroneous claim construction, or incorrectly applied the law governing claim construction to the undisputed facts of the structure described in the specification").

In particular, there is no dispute that MD5 and SHA-1 use, within their broader algorithmic structures, a form of addition.<sup>9</sup> Not only is this not the same type of addition

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<sup>9</sup> This addition was described by Professor Hellman as "modulo addition," a process where bits wrap around, as in a clock. [Trial Tr. Day 7, 80:18-81:21] This account is not contradicted or disputed by Mr. Klausner, who only

disclosed in the '216 patent but, as discussed above, the proper comparison is not between the modulo addition steps within MD5 or SHA-1 and the "summation algorithm" of the '216 patent, but rather between the entire accused algorithmic structure that allegedly accomplishes the claimed function of generating the licensee unique ID – here, the license digest – and a summation algorithm. *Odetics*, 185 F.3d at 1268. Mr. Klausner conceded that his explanation of MD5 was incomplete. [Klausner Testimony, Trial Tr., Day 3, 122:06-122:23; *see also* 32:06-32:11 and 34:08-34:10] By contrast, there is no dispute as to the complete overall structure and operation of the MD5 and SHA-1 algorithms as explained by Professor Wallach, and as reflected in the source code. MD5 and SHA-1 differ from the '216 patent summation algorithm in a number of key structural respects. First, they perform modulo arithmetic over a series of "operations" on an arbitrary number of fixed-length pieces of an arbitrarily long input, rather than "summation" of an arbitrary number of whole inputs of any length. [See, e.g., Klausner Testimony, Trial Tr., Day 3, 33:10-33:12; Wallach Testimony, Trial Tr., Day 7, 162:16-164:07] Second, these fixed-size pieces of the input are processed through special non-linear, compressive, one-way functions. [Wallach Testimony, Trial Tr., Day 7, 146:12-147:01 ("So if you ignore the small compressive function, you've ignored the heart and soul that makes MD5 what it is."), 159:22-162:14, 162:16-163:12; PX-1095 at p. 5] Third, MD5 and SHA-1 perform circular rotation and "mixing" operations, modifying the bit structure within processed blocks, as well as the order of processed blocks in the output. [Wallach Testimony, Trial Tr., Day 7, 77:11-80:14 and 163:21-165:11; Trial Tr., Day 8, 116:22-118:25]

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described MD5 as performing "addition" with no further specificity. [See, e.g., Trial Tr. Day 3, 32:01-32:11; 34:19-35:02] If the proper comparison were between the addition steps in MD5 or SHA-1 and "summation," the use of this kind of modulo arithmetic alone renders the "addition" used in MD5 and SHA-1 as at least not literally the same as the '216 patent "summation algorithm." Nor is there evidence in the record, including from Mr. Klausner, that modulo arithmetic of this sort is equivalent to "summation" in the '216 patent, because Mr. Klausner ignored this important detail in his description of MD5.

These fundamental structural differences, by design, have a material impact on the result of MD5 and SHA-1. The functions are “one-way” or “irreversible,” which means that any properties of the input, such as any alleged “association” with a licensee, are destroyed with regard to the output. [Wallach Testimony, Trial Tr., Day 7, 169:04-171:21] That is, even if you know how the one-way hash function operates, and you know the output of the algorithm, it is impossible even to guess any one input that would create the output. [Wallach Testimony, Trial Tr. Day 7 at 136:01-136:21] The one-way nature of the accused hashes is accomplished precisely because they do not perform mere addition, and is one of the reasons why the results of MD5 and SHA-1 cannot be “licensee unique IDs.” In other words, the core aspect of MD5 and SHA-1 is not the use of modulo addition, which is an incidental implementation detail; rather, it is the processing of pieces of the input through one-way functions, and the use of circular shifters and mixing operations to scramble the input, neither of which involves “addition.” [Hellman Testimony, Trial Tr., Day 7, 77:11-80:14; Wallach Testimony, Trial Tr., Day 7, 145:18-146:11; Trial Tr., Day 8, 119:18-120:03; PX-1095 at p. 10 (defining “ROTATE\_LEFT”)]

All of these properties of MD5 and SHA-1, considered individually, serve to establish substantial dissimilarity between MD5/SHA-1 and “summation algorithms.” Taken as a whole, as required under § 112, ¶ 6, and given the complete lack of contradictory evidence, there can be no question that MD5 and SHA-1 are not structurally similar to summation algorithms. This difference is particularly evident under the “function-way-result” test when examining the properties of MD5 results. MD5 is “irreversible,” and its outputs are a fixed 128 bits long regardless of input. In contrast, simple addition is reversible in that it is trivial to identify any number of possible inputs that would give the same output, and has no limit on the size of its output. These very different results matter in relation to the claimed function of a “licensee

unique ID generating means,” *i.e.*, generation of a “licensee unique ID.” As discussed above, the irreversibility of MD5 and SHA-1 destroys or breaks any alleged “association” between its input and a licensee, causing the output to not be a “licensee unique ID.” In contrast, “summation” not only preserves the “uniqueness” of its constituent inputs, but also any other properties of those inputs. Thus, rather than creating or preserving the “association” required of a “licensee unique ID,” MD5 and SHA-1 by design destroy any such “association,” and thus are not functionally the same as or equivalent to a “licensee unique ID generating means.”

The position argued for by Uniloc and accepted by the jury, in addition to being wholly unsupported by the evidence in the record, also renders the structural requirement for this claim term meaningless, in that any structure using a plus sign would meet the structural requirement of a “licensee unique ID generating means.” In Uniloc’s view, even the other three basic arithmetic operations would infringe, given that multiplication can be represented as iterative addition, subtraction can be represented as addition of a negative number, and division can be represented as iterative addition and subtraction. Uniloc’s skeletal disclosure of a plus sign cannot capture all algorithms, and this result amounts to precisely what Uniloc sought and lost on claim construction (the generic term “algorithm,” wholly unsupported by the specification). Uniloc should be held to what it disclosed in the patent: an algorithm that, to achieve its core function, performs summation of its inputs, along with equivalents thereof.

**(b) Uniloc’s Corporate Admission under Rule 30(b)(6)  
Corroborates Non-Infringement**

Mr. Timothy Cooper was Uniloc’s corporate designee under Fed. R. Civ. P. 30(b)(6) on the topic of “the design, development, structure, function, configuration, architecture and operation of any product or technology that practices, employs, implements or embodies, or was capable of practicing, employing, implementing or embodying any claim of the patent in suit.”

[Cooper Testimony, Trial Tr., Day 7, 92:04-92:13] Mr. Cooper unequivocally testified that an MD5 hash function is not equivalent to a summing operation. [*Id.* at 101:23-25 (“Q. So do you consider the MD5 hash to be equivalent to a summing operation. A. No.”)]

In his testimony, Mr. Cooper explained that the MD5 hash function is more complex than a simple summation algorithm, and distinguished MD5 from “simple” checksums using addition:

23 Q. So do you consider the MD5 hash to be equivalent  
24 to a summing operation?  
25 A. No.

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01 Q. Why not?  
02 A. Because a summing operation is, to me, means  
03 adding things up.  
04 Q. And the MD5 is more sophisticated?  
05 A. Yes.

[*Id.* at 100:21-102:05] Mr. Cooper likewise testified that a SHA-1 hashing function is not equivalent to summing because, like MD5, it is “complicated” and irreversible:

10 Q. What is SHA-1?  
11 A. It’s another hash.  
12 Q. Is that like summing?  
13 A. No. It’s another complicated hash like MD5. It’s  
14 just different.  
15 Q. So SHA-1 is not equivalent to summing?  
16 A. No.

[*Id.* at 102:10-103:06]

Thus, Uniloc’s corporate representative on embodiments of the ‘216 patent, including allegedly infringing products, admitted nonequivalence. In the absence of explanation or evidence to the contrary, this statement, deemed to be the testimony of Uniloc itself, corroborates the non-equivalence of one-way hashing and a summation algorithm and warrants entry of judgment as a matter of law for Microsoft on this issue. *See MOSAID Techs. Inc. v. Samsung Elecs. Co.*, 362 F. Supp. 2d 526, 542 (D.N.J. 2005) (granting summary judgment of non-infringement, where the plaintiff’s Rule 30(b)(6) designee admitted that the structure required by

the means-plus-function claim limitation was not equivalent to the structure in defendant's accused products); *see also State Farm Mutual Automobile Ins. Co. v. New Horizont, Inc.*, 250 F.R.D. 203, 212 (E.D. Pa. 2008) (fact that 30(b)(6) testimony is not a judicial admission "does not mean . . . that the party may retract prior testimony with impunity.").

The only "explanation" of this testimony provided by Uniloc was during Mr. Hayes' closing argument, where he argued that Mr. Cooper is "a guy that doesn't even know how it works," referring to both MD5 and SHA-1.<sup>10</sup> [Trial Tr., Day 10, 113:19-114:08] The fact that Mr. Cooper could not explain the detailed intricacies of MD5 and SHA-1 does not help Uniloc; it hurts them. The fact that even Uniloc's own accomplished computer programmer did not understand, and could not explain, these details shows that MD5 and SHA-1 are complex algorithms that are not the same as or equivalent to a "summation algorithm." That much, Mr. Cooper knew, and that much, he admitted under oath when testifying on Uniloc's behalf. That corroborates non-infringement.

Moreover, as attorney argument alone, Mr. Hayes' attempt to discredit Uniloc's own designee qualifies neither as a "reasonable explanation" by Uniloc, nor as evidence on which the jury could base its finding of infringement, as the jury was instructed. [Trial Tr., Day 10, 164:18-165:01; *see also, e.g., U.S. v. Arboleda*, 20 F.3d 58, 61 (2d Cir. 1994) ("A summation is not evidence.")]

Mr. Hayes' statement was also incorrect on the law; as Uniloc's corporate designee, Mr. Cooper's personal knowledge is irrelevant, as he is presumed to have the knowledge of and speak for the corporation on the topics on which he was designated. *See, e.g., Sprint Communications Co. v. Theglobe.com, Inc.*, 236 F.R.D. 524, 527 (D. Kan. 2006) (The testimony

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<sup>10</sup> Mr. Klausner was Uniloc's only other witness to even attempt to speak on this issue, and he did not express a contradictory opinion, nor was he in a position to explain Mr. Cooper's admission.

of a Rule 30(b)(6) designee “represents the knowledge of the corporation, not of the individual deponents”); *United States v. Massachusetts Indus. Finance Agency*, 162 F.R.D. 410, 412 (D. Mass. 1995) (a Rule 30(b)(6) designee presents the corporation’s position on the noticed topics); *Calzaturificio v. Fabiano Shoe Co., Inc.*, 201 F.R.D. 33, 37 (D. Mass. 2001) (a Rule 30(b)(6) designee is not required to have personal knowledge on the designated subject matter); *Qualcomm Inc. v. Broadcom Corp.*, 2008 WL 66932 at \*11 (S.D. Cal. 2008) (a Rule 30(b)(6) witness is “testifying as an organization’s most knowledgeable person on a specific subject”). If Uniloc felt at the time that Mr. Cooper’s knowledge was lacking, it should not have designated him. Other than Mr. Hayes’ attorney argument, Uniloc did nothing, either at or after Mr. Cooper’s deposition, to explain, counter, or qualify Mr. Cooper’s admission as Uniloc’s corporate designee.

**(c) Uniloc’s Failure to Present Expert Opinion on Equivalence Also Supports Non-Infringement**

Although non-infringement in this case is actually quite simple (*e.g.*, because Microsoft destroys any link between licensee and license digest and because Uniloc has not patented all algorithms that use addition, there is no infringement), the underlying technology (*e.g.*, hashing) is complex. According to the Federal Circuit, “‘typically’ expert testimony will be necessary in cases involving complex technology.” *Centricut, LLC v. Esab Group, Inc.*, 390 F.3d 1361, 1370 (Fed. Cir. 2004) (citing *Schumer v. Lab. Computer Sys., Inc.*, 308 F.3d 1304, 1315 (Fed. Cir. 2002)). In *Centricut*, the Federal Circuit went on to note that, while there is no “per se rule that expert testimony is required to prove infringement when the art is complex,” where a case presents complex technology, “where the accused infringer offers expert testimony negating infringement, the patentee cannot satisfy its burden of proof by relying only on testimony from

those who are admittedly not expert in the field.” *Id.* It follows that the patentee also cannot meet its burden by relying on no expert testimony at all.<sup>11</sup>

Mr. Klausner never opined that MD5 or SHA-1 are the same as or equivalent to a “summation algorithm” in his expert reports. The Court therefore did not allow Mr. Klausner to express this opinion at trial. [Trial Tr., Day 3, 11:09-12:17 and 14:17-19:02 (“What Mr. Klausner may not do is express an opinion as an expert that, in his opinion, those algorithms are summers or summation algorithms or their equivalence, because that opinion was not set forth in his expert report.”); *see generally id. at* 3:04-21:15] Consistent with this ruling, the Court also did not allow Mr. Klausner to express an opinion on the ultimate issue of whether claim 19 is infringed. [Trial Tr., Day 3, 54:25-56:22]

Uniloc’s lack of an expert opinion on the structural equivalence issue, and on the ultimate issue of infringement, also supports finding non-infringement as a matter of law, given that Microsoft’s expert, Professor Wallach, gave the opposite opinion negating infringement. Professor Wallach testified that the MD5 and SHA-1 hash functions were comparable to the one-way hash functions disclosed in the Hellman prior art, that all of them would be considered “cryptographic hash functions” by persons working in the field, and that such one-way hash functions are not the same as or equivalent to summation. [Trial Tr., Day 3, 7,136:01-136:24; 167:08-167:25; 169:04-171:21] So, too, did Prof. Hellman and Mr. Hughes offer the opinions that MD5 and SHA-1 were not the same as or equivalent to summation algorithms, with a detailed explanation of why. [Hughes Testimony, Trial Tr. Day 4, 191:09-193:08 (“Q. Does the

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<sup>11</sup> Indeed, in its own motion for judgment as a matter of law on invalidity, Uniloc challenged Microsoft’s expert testimony on invalidity as insufficient, even though Uniloc offered no rebuttal, and went so far as to imply – incorrectly – that there is a requirement to offer expert testimony on issues of law such as obviousness. [D.I. 354, pp. 4-6] Uniloc in taking this position in effect concedes that its failure to offer expert testimony on this summation issue is fatal to its infringement case. It simply did nothing to overcome Microsoft’s expert testimony regarding non-infringement.

fact that these algorithms could be used for creating a checksum, in your mind, mean they can fairly be described as summers or summation algorithms? A. (Mr. Hughes) No, not at all.”; Hellman Testimony, Trial Tr. Day 7, 64:13-65:16 (“That’s the difference between a simple operation like a summation or an OR conditional, just one by itself, and these MD5 and SHA-1 and what I described in my patent where you have many, many operations.”)]

While Uniloc was prohibited in its case-in-chief from having Mr. Klausner offer an opinion that one-way hash functions were the same as or equivalent to summation algorithms, it could have done so in rebuttal in response to the above testimony from Microsoft’s experts. That is, as the Court noted during a side-bar, Uniloc could have called Mr. Klausner to rebut Dr. Wallach’s opinion on the “summation algorithm” issue. [Trial Tr., Day 3, 102:22-103:02] Its decision not to, in the face of Dr. Wallach’s uncontroverted opinion, and the uncontroverted opinions of Prof. Hellman and Mr. Hughes, supports the Court finding non-infringement as a matter of law. *Centricut*, 390 F.3d at 1370.

There was thus no reasonable factual basis on which the jury could have found infringement where no witnesses, including Uniloc’s expert, gave the opinion that MD5 and SHA-1 are “summation algorithms” or equivalent, and where its 30(b)(6) designee testified to the contrary. Although Mr. Klausner was allowed to provide a tailored factual explanation of his view on how MD5 operates, this explanation was unmoored from both the Court’s claim construction and the relevant structure in the ‘216 patent, and cannot serve as the basis for a finding of infringement. *CytoLogix Corp. v. Ventana Medical Systems, Inc.*, 424 F.3d 1168, 1178 (Fed. Cir. 2005) *citing* *Alpex Computer Corp. v. Nintendo Co.*, 102 F.3d 1214, 1222 (Fed. Cir. 1996) (reversing jury verdict of infringement where patentee “failed to identify the structure in the specification that is the ‘temperature controller means’ and compare it to the structure of

the accused device” because “it is insufficient for the patent holder to present testimony ‘based only on a functional, not a structural, analysis.’”); *see also Johns Hopkins University v. Datascop Corp.*, 543 F.3d 1342, 1349 (Fed. Cir. 2008) (reversing district court’s denial of motion for JMOL of non-infringement where liability expert’s opinion testimony was disregarded even though his predicate factual testimony stood).

In spite of the Court’s order, Mr. Klausner attempted to couch his testimony, in response to open-ended questions, in the language of the Court’s claim construction, as the Court noted. [Trial Tr., Day 3, 97 and 125-27] However, in doing so, he applied an incorrect variant of that construction. Mr. Klausner and Uniloc’s counsel repeatedly referred in a conclusory fashion to MD5 as “summarizing” the input to the algorithm. [See, e.g., Trial Tr., Day 3, 34:18-35:02 (“the way the MD5, the Message Digest works, is it *summarizes the entire message* into a shortened form by using addition”); 88:02-88:03 (“these are the same algorithms that create *a summary of the license*”); 88:17-88:20 (“Which is to take the data that it receives as input and, through a series of operations that include addition, *summarizes that information* into a 128-bit-long number.”) (emphases added)] Because of his failure to apply the Court’s correct claim construction, Mr. Klausner’s testimony regarding MD5, including to the extent he can be deemed to have made any opinions regarding MD5 as a “summation algorithm,” should be disregarded. *Amazon.com, Inc. v. Barnesandnoble.com, Inc.*, 239 F.3d 1343, 1351 (Fed. Cir. 2001) (“an improper claim construction may distort the infringement and validity analyses”); *Omega Patents, LLC v. Fortin Auto Radio, Inc.*, 2007 WL 4373110 at \*3 (M.D. Fla. 2007) (“where the Court’s claim construction differed from Roman’s construction if the basis of the opinions has not changed then the opinions are inherently flawed because they are predicated on improper claim construction.”).

Beyond Mr. Klausner's failure to provide necessary opinion testimony, he also presented a materially incomplete factual description of the accused one-way hash functions. Mr. Klausner even admitted that his explanation was incomplete. [Trial Tr., Day 3, 32:06-32:11 ("It does a number of other operations, what are called logical operations in mathematics. But the essence is it eventually adds each of the results of these piece-wise operations into a bucket or a hash, and that hash becomes the output of the algorithm.") and 34:08-34:10 ("Now, it uses two kinds of operations – actually, more than two kinds, but two primary kinds of operation to do its work."); 122:21-122:23 ("Now, I'm not saying that that's all that MD5 does, but that's a significant portion of the MD5 algorithm.")]

As a matter of law, Mr. Klausner's incomplete explanation of MD5 cannot serve as the basis for the jury's finding of infringement. By omitting a description of all aspects of MD5 and SHA-1, Mr. Klausner did not provide the jury with the proper factual predicate, a description of the whole structure of these algorithms, necessary to prove infringement. *Business Objects, S.A. v. Microstrategy, Inc.*, 381 F.Supp.2d 1107, 1111 (N.D. Cal. 2005) ("the query engine algorithms of the two systems must be compared *as a whole*") (emphasis added). His analysis also did not compare the whole structures of MD5 and SHA-1 to the whole structure of a "summation algorithm" as disclosed on the '216 patent; he, in fact, made no reference to the '216 patent at all in his testimony. In order to show that an accused product contains a particular means-plus-function element, the patentee must show that the accused product has not only the same or an equivalent structure, but that that structure performs the same function. *See Pennwalt Corp. v. Durand-Wayland, Inc.*, 833 F.2d 931, 934 (Fed. Cir. 1987) (en banc) ("To determine whether a claim limitation is met literally, where expressed as a means for performing a stated function, the court must compare the accused structure *with the disclosed structure*, and must find equivalent

*structure* as well as *identity* of claimed *function* for that structure.”) (emphasis added). Thus, in order to prove infringement, Uniloc was obligated to show that the entire hash algorithm that produces that digest, not just some piece of that hash algorithm, is the same as equivalent to the patent’s summation algorithm. The jury had no reasonable basis for finding such an equivalence here.<sup>12</sup>

**(d) Uniloc’s “Contemporaneous Documents” Do Not Fill the Void Left by Its Lack of Expert Testimony**

In cross-examination of Microsoft’s witnesses and during its closing arguments, Uniloc pointed to a group of what it called “contemporaneous documents” (many of which Uniloc pulled from the Internet weeks before trial) that it argued were descriptions of MD5 or SHA-1 as “summation” or admissions of same. None of these documents, when examined more than superficially, says what Uniloc wants it to say, none of the witnesses who was examined on these documents agreed with Uniloc, and the conclusory statements contained therein are legally irrelevant to the ultimate issue of § 112, ¶ 6 equivalence and do not otherwise shore up Uniloc’s lack of evidence.

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<sup>12</sup> Mr. Klausner’s incomplete description of the operation of MD5 is also contradicted by evidence that he himself sponsored into the record. According to Mr. Klausner, MD5 performs “left shift” operations along with addition, and Mr. Klausner described “left shift” as multiplication, or “iterative” addition. [Trial Tr., Day 3, 34:12-34:17] With reference to the same source code on which Mr. Klausner relied, Professor Wallach noted that rather than “left shifting,” MD5 performs “circular shifting,” a logical operation that is not multiplication. [Trial Tr., Day 7, 145:18-146:11] This understanding was confirmed on cross-examination. [Trial Tr., Day 8, 119:18-120:03] Professor Hellman also confirmed that MD5 only performs “circular shifting” in his explanation of the algorithm. [Trial Tr., Day 7, 77:11-80:14 (“So a shift operation – it’s actually what called a cycled shift.”)] The source code itself, in portions that Mr. Klausner omitted during the portions of his direct testimony where he described it, is clear that the alleged “left shift” is really a “rotation.” [PX-1095 at p. 10] Mr. Klausner never rebutted this evidence. Thus, his testimony on MD5 and SHA-1 is both incomplete and self-contradictory, and must be disregarded as a basis on which the jury could decide infringement. *Wechsler v. Macke Int’l Trade, Inc.*, 486 F.3d 1286, 1294 (Fed. Cir. 2007) (disregarding an expert’s testimony in reversing a denial of JMOL where that testimony was contrary to the facts in evidence); *Johns Hopkins University v. Datacube Corp.*, 543 F.3d 1342, 1349 (Fed. Cir. 2008) (disregarding an expert’s opinion testimony in reversing district court’s denial of motion for JMOL of non-infringement where the expert’s factual testimony conflicted with his opinion testimony); *Brooke Group Ltd. v. Brown & Williamson Tobacco Corp.*, 509 U.S. 209, 242 (1993) (“When an expert opinion is not supported by sufficient facts to validate it in the eyes of the law, or when indisputable record facts contradict or otherwise render the opinion unreasonable, it cannot support a jury’s verdict.”).

First, Uniloc's lack of expert witness testimony supporting its interpretation of the documents undermines their use as a basis for the jury's verdict. None of these documents was shown to Mr. Klausner, and he thus did not, as a technical expert, put forth an interpretation of the documents that comports with Uniloc's position. As explained above, expert testimony is needed to support presentation of relevant evidence to the jury in cases such as this. *Centricut* 390 F.3d at 1370. This requirement of expert testimony is made especially acute because the documents on which Uniloc relied either facially do not support Uniloc's position or are at minimum ambiguous. This ambiguity was confirmed by Microsoft's witnesses, Mr. Hughes and Professor Wallach, the only witnesses to whom the documents were shown. In each instance, both Mr. Hughes and Professor Wallach went against Uniloc's proposed interpretations. [*See, e.g.,* Hughes testimony, Trial Tr. Day 4 at 171:03-172:03 (re Trial Ex. 50), 206:01-207:04 (re Trial Ex. 1103); Wallach testimony, Trial Tr. Day 8 at 45:16-46:11 and 98:22-99:14 (re Trial Ex. 43), 34:06-36:17, 95:25-97:02, and 108:24-109:06 (re Trial Ex. 50), 37:12-38:02 and 97:03-98:02 (re Trial Ex. 1111)] Thus, because of the complexity of the technology, the jury could not draw reasonable inferences in favor of Uniloc's position from the documents alone in the absence of supporting expert testimony from Mr. Klausner rebutting the testimony from Microsoft's expert, Professor Wallach, negating infringement.

For example, PX-35 is a document describing programming in Visual Basic. The portion relied on by Uniloc discusses hashing algorithms in general, and uses a summation algorithm as one example of how to create a simple hash. [PX-35 at UNILOC 85566] However, on the very next page, it distinguishes the simple summation example from SHA-1, noting that "[a] good hashing algorithm should produce unique results and be *collision-free*. SHA-1 produces collision-free results, and it scrambles and condenses the original string in such a way that it's

considered computationally infeasible to derive the original string.” [*Id.* at UNILOC 85567 (emphasis in original)] The document thus confirms the testimony of Professor Wallach in his description of MD5 and SHA-1 and the special properties of their outputs. In spite of Mr. Hayes’ attempts to confuse the issue, Professor Wallach confirmed this understanding during his cross-examination and redirect testimony. [Trial Tr., Day 8, 46:16-50:25 and 99:15-101:21]

As another example, PX-36 is a selective excerpt from the Microsoft Computer Dictionary, Fourth Edition. At trial, Uniloc cross-examined Mr. Hughes and Professor Wallach on the definition of the term “hash total” in the document. According to the dictionary, a “hash total” is:

“[a]n error-checking value derived from the addition of a set of numbers taken from data (not necessarily numeric data) that is to be processed or manipulated in some way. After processing, the hash total is recalculated and compared with the original total. If the two do not match, the original data has been changed in some way.”

[PX-36 at UNILOC 85583]

On its face, the definition of “hash total” has nothing to do with the subject matter of this case. Uniloc has not alleged, and no witness or document stated, that MD5 or SHA-1 are “hash total” algorithms. More directly, both Mr. Hughes and Professor Wallach confirmed that they understood this definition to have nothing to do with MD5 or SHA-1, and not to describe either algorithm or even one-way hashing algorithms generally. [Trial Tr., Day 4, 165:03-167:25; Trial Tr., Day 8, 43:09-45:05 and 98:03-98:21]

As illustrated by these examples, none of the documents cited by Uniloc fills the void left by its lack of expert opinion, overcomes its admission under Rule 30(b)(6), or negates the undisputed fact that the essence of MD5 and SHA-1 hashes are fundamentally different than summation algorithms – each of which precludes infringement.

**(e) The Doctrine of Equivalents Again Does Not Help Uniloc**

Uniloc's proof fails under the doctrine of equivalents for the same reason it fails under § 112, ¶ 6, since both require a showing of equivalent structure, and Uniloc failed to introduce legally sufficient evidence that one-way hashing is equivalent to summation. *Kemco Sales*, 208 F.3d at 1364 ("Because the 'way' and 'result' prongs are the same under both the section 112, paragraph 6 and doctrine of equivalents tests, a structure failing the section 112, paragraph 6 test under either or both prongs must fail the doctrine of equivalents test for the same reason(s).").

**3. Uniloc Failed to Establish that the Accused Products Include the Required "Registration System" and "Mode Switching Means" Because It Focused on a "Digital License" Rather Than the "Legal License" Required by the Claim Construction**

In order to prove infringement, Uniloc also had to show that Microsoft's accused Product Activation is a "registration system," and that receipt of a *legal* license switches Microsoft's software into "use mode." [Trial Tr. Day 10, 138:21-138:24] In attempting to do so, Uniloc misread the Court's claim constructions of both terms and built its entire infringement case as to these claim elements around the wrong thing – the activation data that Microsoft happens to call a "digital license." Notwithstanding this label, the Court's construction is clear that the "license" referred to in the '216 patent is a *legal* license, a license agreement. In the case of the accused products, it is undisputed that the act of legal licensing occurs *before* receipt of the "digital license" and before activation. The completion of *legal* licensing prior to activation is dispositive of infringement.

**(a) Product Activation Is Not a "Registration System."**

The construction of claim 19 makes it clear that a "licensing procedure" is a procedure whereby an end-user becomes *legally* licensed. Claim 19 requires "a registration system for licensing execution of digital data in a use mode." ['216 patent, PX-1, at 15:23-15:24] The

Court construed and instructed the jury that a “registration system” is “a system that allows digital data or software to run in a use mode on a platform if and only if an appropriate licensing procedure has been followed.” [Trial Tr. Day 10, 136:09-136:13]

Critically, the Court made clear that the “license” involved in the “licensing procedure” is a legal license, which in the case of the accused Microsoft products is the End-User Licensing Agreement (or “EULA”). [Trial Tr. Day 10, 138:21-138:24] In other words, in order for Product Activation to infringe, it must provide the only way (“if and only if”) to enter a “use mode” by following a procedure whereby legal “licensing” of that “use mode” takes place.

The Court’s construction follows from the specification, where the technological means of providing a user with a licensee unique ID is required for legal licensing of a protected product in a try-before-you-buy system. [PX-1, Abstract and 3:03-3:09 (the unlocking code is communicated “to the intending licensee as a permit to licensed operation of the digital data in a use mode.”); 2:40-2:48 (use mode is a mode “to fulfill the seller’s/licensor’s obligations in relation to the sale or license of the right to execute the digital data or software in the use mode.”); Figure 2a, Box B1 (showing “details of new licensing agreement” presented as part of registration process)]

It is undisputed that the accused activation process is not a “licensing procedure.” Uniloc’s Mr. Klausner admitted that licensing in the accused products, through acceptance of the EULA, occurs *before* activation:

- 21 Q. All right. And then what happens next?
- 22 A. The next screen that comes up is the end user
- 23 license agreement for Microsoft software.
- 24 If the user accepts these terms, then another
- 25 screen comes up where the user gets to choose to what
- 01 extent they’re going to install the product.

\* \* \*

- 07 Q. Okay. And has the user activated anything yet  
08 now?  
09 A. No. The installation will have to complete before  
10 the user can activate.

[Trial Tr. Day 2, 144:11-16, 144:22-25; *see also* Trial Tr. Day 3, 172:05-172:16] The process of legal licensing, via the EULA, thus occurs before activation takes place. Activation is neither a predicate to nor required for creating a legal license to use the accused products.

Uniloc's evidence at trial focused only on what Uniloc referred to as the "digital license," a piece of data sent by the Clearinghouse to the client computer during activation. Mr. Klausner admitted as much at trial:

- 08 Q. All right. So there are actually two licenses  
09 floating around here in Product Activation, right?  
10 There's the end user license agreement, which I just  
11 showed, and there's also this thing that you've  
12 referred to as a digital license, correct?  
13 A. I've only testified about the digital license.  
14 Q. There are two licenses, right?  
15 A. It does look like there are, yes.

[Trial Tr. Day 3, 169:08-169:15] Mr. Klausner also made clear that his testimony was predicated on an understanding that the "license" in the Court's construction referred to the digital license.

[Trial Tr. Day 3, 171:19-171:22; *see also* Trial Tr. Day 3, 77:17-78:1]

Mr. Klausner's admissions alone are dispositive on the issue of infringement of this limitation because there is no record evidence that Product Activation is a "licensing procedure," as construed, and because all of the evidence proffered by Uniloc focused on the wrong "license." The jury had no evidentiary basis to conclude that Product Activation is a "licensing procedure" where Uniloc's own expert admitted (and it is undisputed) that legal licensing occurs prior to activation, and where his opinion of infringement of this limitation was directed to a "license" that he himself admitted is not the legal license agreement required by the Court's construction and the jury charge. *See, e.g., Johns Hopkins University v. Datascope Corp.*, 543

F.3d 1342, 1349 (Fed. Cir. 2008) (reversing district court's denial of motion for JMOL of non-infringement after disregarding technical expert's opinion of infringement where that opinion was contradicted by the expert's factual testimony).

Uniloc cannot overcome this failure of proof by citing to documents that use the word "registration" divorced from the Court's construction of that term, including the requirement of legal licensing. This is semantics, not substance. Merely using words of the claim language is legally insufficient to show infringement of a construed claim. *See, e.g., Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 974, 983 (Fed. Cir. 1995) (affirming district court's grant of judgment of non-infringement despite defendant's use of the claim term "inventory" to describe its product); *Phillips Petroleum Co. v. Huntsman Polymers Corp.*, 157 F.3d 866, 877 (Fed. Cir. 1998) (finding the use of the words "block copolymer" in defendants' internal documents insufficient to raise a genuine issue of material fact on summary judgment even though the words "block copolymer" appeared in the construed claim language). The jury could not, as a matter of law, draw an inference of infringement from documents making the conclusory statement that Product Activation involves "registration," is a "registration system," or uses a "registration authority," as Uniloc provided no evidentiary foundation that such uses of the word "registration" are in any way connected to the Court's claim construction of "registration system."

**(b) There Is No Evidence That Product Activation Switches The Accused Products Into A "Use Mode" *Only If* License Digests Have Matched**

Claim 19 also requires a "mode switching means operable on said platform which permits use of said digital data in said use mode on said platform only if a licensee unique ID generated by said local licensee unique ID generating means has matched a licensee unique ID generated by said remote licensee unique ID generating means." A "use mode" is "[a] mode that

allows full use of the digital data or software in accordance with the license.” [Trial Tr. Day 10, 138:12-138:13]

Critically, although the Court noted in the jury charge that “limitations could be either functional or temporal (that is, time-based),” the Court also stated that “full use” must be judged “in accordance with the EULAs.” [Trial Tr. Day 10, 138:14-139:02]

In this case, “full use,” *in accordance with the EULAs*, occurs when the user enters the “grace period” because grace period use *is* the full use permitted by the EULA before activation. [See, e.g., Trial Ex. B-5, Office XP Standard Edition EULA, at MS-U 533450 (“Mandatory Activation. You may not be able to exercise Your rights to the Software Product under this EULA after a finite number of product launches unless You activate Your copy of the Software Product in the manner described during the launch sequence.”) and Trial Ex. C-5, Windows XP EULA, at MS-U 533509 (“Mandatory Activation. The license rights granted under this EULA are limited to the first thirty (30) days after you first install the Product unless you supply information required to activate your licensed copy in the manner described during the setup sequence of the Product. You can activate the Product through the use of the Internet or telephone; toll charges may apply. You may also need to reactivate the Product if you modify your computer hardware or alter the Product. There are technological measures in this Product that are designed to prevent unlicensed or illegal use of the Product. You agree that we may use those measures.”)] Thus, even were this issue one for the jury to decide, no evidence supports infringement. Although the grace period is at least limited temporally, the issue of whether the grace period is a use mode – *i.e.*, that such a temporal limitation or any other limitation is “in accordance with the EULAs” – is an issue of contract interpretation, one properly decided as a matter of law by the Court. See, e.g., *Lohnes v. Level 3 Communs., Inc.*, 272 F.3d 49, 53 (1st

Cir. 2001); *see also Lan Sys. v. Netscout Serv. Level Corp.*, 183 F. Supp. 2d 328, 339 (D. Mass. 2002) (“click-wrap” licenses are an appropriate way to form a software license contract); *ProCD, Inc. v. Zeidenberg*, 86 F.3d 1447, 1450, 1452-53 (7th Cir. 1996); *Novell, Inc. v. Unicom Sales, Inc.*, 2004 WL 1839117, \*11 (N.D. Cal. 2004) (shrink wrap licenses “are no less enforceable than any other type of contract.”). Given that this issue is one of law for the Court, the jury’s verdict is irrelevant and should be disregarded and judgment entered for Microsoft.<sup>13</sup>

As with “registration system,” Uniloc also cannot overcome its failure of proof with documents that merely use the words “full use” as “evidence” of infringement, because such documents are not tied to Court’s claim construction and its requirement for *legal* use in accordance with the EULA.

**(c) The Doctrine of Equivalents Again Does Not Help Uniloc**

There is also no infringement of the “registration system” or “use mode” limitations under the doctrine of equivalents. By requiring that digital data or software be executable in a use mode “only if” a legal licensing procedure is followed, Uniloc specifically excluded systems that allow use of the software in a use mode without going through such a procedure. The Federal Circuit has held that “by defining the claim in a way that clearly excluded certain subject matter, the patent implicitly disclaimed the subject matter that was excluded and thereby barred the patentee from asserting infringement under the doctrine of equivalents.” *SciMed Life Sys., Inc. v. Advanced Cardiovascular Sys., Inc.*, 242 F.3d 1337, 1346 (Fed. Cir.2001).

**4. Uniloc Also Failed to Establish Direct Infringement After Abandoning Indirect Infringement**

Hours before closing argument, Uniloc abandoned its indirect infringement claims (contributory infringement and inducement). [D.I. No. 365] It then failed to offer competent

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<sup>13</sup> At a minimum, the Court should order a new trial and instruct the jury on the meaning of the EULA.

evidence of direct infringement because it is undisputed that *Microsoft* does not assemble the complete system of claim 19. In particular, there is no record evidence that Microsoft supplies the computers required to implement the local licensee unique ID generating means and mode switching means. There is also no evidence that Microsoft itself has used such computers. To the contrary, even on Uniloc's allegations, these computers are those of the end-users, not Microsoft. Therefore, there is no infringement, as a matter of law, under Section 271(a).

In the context of apparatus claims such as claim 19, the Federal Circuit has established that there can be no direct infringement of an apparatus claim by one entity where a third party completes the apparatus, such as by establishing one of its elements. *Cross Medical Products, Inc. v. Medtronic Sofamor Danek, Inc.*, 424 F.3d 1293, 1311 (Fed. Cir. 2005); *see also Deepsouth Packing Co., Inc. v. Laitram Corp.*, 406 U.S. 518, 528 (1972) (holding that the "substantial manufacture of the constituent parts" of an accused apparatus did not constitute direct infringement because "a combination patent protects only against the operable assembly of the whole and not the manufacture of its parts").

In *Cross Medical Products*, the apparatus claim required that an "anchor seat" be "joined" to a patient's bone. *Id.* This was done by surgeons, not the accused infringer, Medtronic. *Id.* The Federal Circuit found that Medtronic did not directly infringe, because the surgeons ultimately made the complete accused apparatus by contacting the anchor seat to the bone. *Id.* Likewise here, end-users create the accused system by installing on their respective local computers the accused software products, *i.e.*, the "digital data executable on a platform" that when installed includes the alleged "local licensee unique ID generating means" and "mode switching means." Even on Uniloc's theory of infringement, the system of claim 19 simply does

not exist until installation by these third parties. On the undisputed, and undisputable, record, Microsoft does not make, use, or sell the entire and complete system of claim 19.

**5. Remedy: The Court Should Enter JMOL of No Infringement, or at a Minimum Order a New Trial.**

For each of the reasons articulated above, Uniloc failed its burden of proving infringement as a matter of law. The Court should therefore enter judgment for Microsoft.

In the alternative, the Court should weigh the evidence, find that the verdict is against the clear weight of the evidence, and order a new trial.

In any event, a new trial is at minimum warranted because of Uniloc's failure to present any evidence from which a reasonable jury could conclude that Microsoft's Product Activation meets any limitation of claim 19 under the doctrine of equivalents. It is impossible to ascertain whether the jury based its finding of infringement on literal infringement, or infringement under the doctrine of equivalents. Given that there was no legally sufficient basis for a finding of infringement under the doctrine of equivalents, controlling First Circuit precedent dictates that a new trial is warranted. "In this circuit, the rule in civil cases is that 'a new trial is usually warranted if evidence is insufficient with respect to any one of multiple claims covered by a general verdict.' This rule applies not only to general verdicts encompassing multiple causes of action, but to special verdicts where a single verdict question encompasses multiple theories, one of which is defective." *Gillespie v. Sears, Roebuck & Co.*, 386 F.3d 21, 29-30 (1st Cir. 2004) (internal citations omitted) (reversing district court's denial of a new trial where one of three theories of liability was not sufficiently supported by the evidence, and verdict answering seven special interrogatories did not specify under which theory liability was found); *see also Spectrum Sports, Inc. v. McQuillan*, 506 U.S. 447, 459-460 (1993) (reversing judgment against defendant for violations of the Sherman Act where the judgment was affirmed on a legally erroneous basis

“since the jury’s verdict did not negate the possibility that the § 2 verdict rested on the [legally erroneous] attempt to monopolize alone”); *Maryland v. Baldwin et al.*, 112 U.S. 490, 493 (1884) (where the generality of the verdict prevents the reviewing court from perceiving the plea upon which the jury based its verdict, “[i]f ... upon any one issue error was committed, either in the admission of evidence or in the charge of the court, the verdict cannot be upheld, for it may be that by that evidence the jury were controlled under the instructions given.”).

**C. No Reasonable Jury, Applying the Correct Legal Standard, Could Have Found Claim 19 Not Invalid.**

**1. On Uniloc’s Improper Application of Claim 19, Claim 19 Is Anticipated by Hellman.**

Uniloc has neither properly nor consistently applied claim 19 of the ‘216 patent in the same manner for infringement as for validity, and as a consequence has put itself in the untenable position of accusing the same approach found in the prior art of infringement. In particular, there is no question that the Hellman patent is prior art to the ‘216 patent. [See Trial Tr. Day 6, 136:11-137:3] Given Uniloc’s infringement allegations, the evidence at trial compels the conclusion that the Hellman prior art anticipates claim 19. *See Evans Cooling Systems Inc. v. General Motors Corp.*, 125 F.3d 1448, 1451 (Fed. Cir. 1997) (holding that infringement allegations are a proper basis for finding anticipation); *see also Amazon.com, Inc. v. Barnesandnoble.com, Inc.*, 239 F.3d 1343, 1351 (Fed. Cir. 2001) (“A patent may not, like a ‘nose of wax,’ be twisted one way to avoid anticipation and another to find infringement.”). That which infringes, if after, anticipates, if before. *Peters v. Active Mfg. Co.*, 129 U.S. 530, 537 (1889). No doubt it was this core inconsistency between its infringement theory and its validity theory that led Uniloc to waive its rebuttal case and so shield Mr. Klausner from the impossible position in which Uniloc’s contentions and his own prior testimony had placed him.

In this case, the unchallenged testimony of Prof. Wallach and Prof. Hellman and the evidence on the Hellman patent disclosures, together with Uniloc's infringement allegations, establish that the Hellman patent anticipates claim 19. [See generally Exs. S-3 (Hellman patent), I-6, J-6 (articles co-authored by Prof. Hellman), O-9, P-9, and Q-9 (demonstratives used by Prof. Hellman)] Prof. Hellman testified that his patent disclosed, *inter alia*, an authorization process and system in which (1) the same one-way hash functions are used on local and remote computers; (2) the same inputs are provided to each of the local and remote one-way hash functions to generate local and remote hash digests; and (3) a comparator is used to compare those digests to determine whether use of the software is authorized, *i.e.*, licensed. [Trial Tr. Day 6, 167:14-171:19] This unchallenged testimony establishes that Hellman discloses the "registration system," "mode switching means," and "identical algorithm" elements of claim 19. Prof. Hellman also testified that successful authorization would lead to the user's computer allowing the requested number of uses, possibly infinite. [*Id.* at 167:12-14, 168:11-17] This establishes the "use mode" requirement, as Uniloc contends that term should be applied.

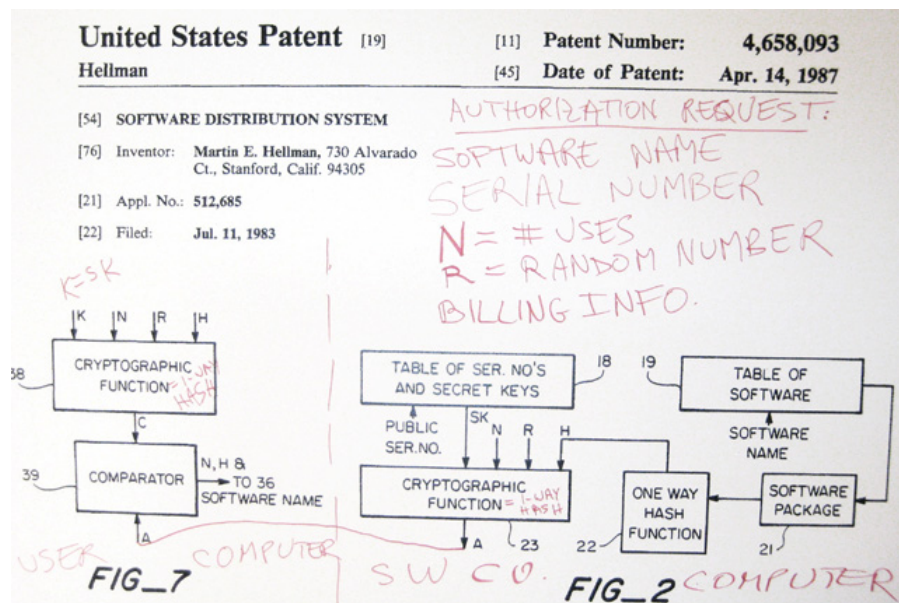
As to the "licensee unique ID generating means," Prof. Wallach testified that the one-way hash functions used in Microsoft's accused Product Activation are comparable to those disclosed in the Hellman prior art, and that all of them would be considered "cryptographic hash functions" in the field. [Trial Tr. Day 7, 167:11-20; *see also* Trial Tr., Day 6, 185:9] Uniloc offered no testimony to dispute this, or to suggest any distinction between the one-way hash functions in Hellman and those in Microsoft's Product Activation. Thus, on Uniloc's allegation that Microsoft's one-way hash functions are equivalent to summation, so too are Hellman's one-way hash functions.

Prof. Hellman described in detail the inputs to his one-way hash functions. These include the secret key SK, which is derived from a “unique” serial number that could be a “user name.” [Trial Tr. Day 6, 155:7-156:7, 163:3-164:2] It also includes the number R, which is designed to be “non-repeating,” could be a random number of 50 bits, and is sent in the authorization request together with billing information, such as credit card information. [*Id.* at, 156:25-160:3] Given Uniloc’s allegation that Microsoft’s Product Key is uniquely associated with a user [*see* Trial Tr. Day 3, 166:6-167:17], the inputs to the one-way hash function in Hellman are even more so. As to Mr. Klausner’s unexplained and conclusory assertion that the Product Key becomes associated with a user when he or she *types* it in during the installation process, so too does the user of Prof. Hellman’s patented invention *write down* both the random number R and the serial number from which SK is derived in the scenario where the authorization request is made by mail. [Trial Tr. Day 7, 67:17-68:8]

Uniloc argued that the random number R was not associated with a licensee because it “came from the hardware” (Trial Tr. Day 10, 33:20-21), suggesting that R should be regarded as “platform-related” information, which the Federal Circuit held could not be the sole basis for generating a licensee unique ID. *See Uniloc USA, Inc. v. Microsoft Corp.*, 290 Fed. Appx. 337, 343 (Fed. Cir. 2008). The Federal Circuit’s reference to “platform-related” information does not exclude all information *generated* by the user’s computer, and if it did, that would extinguish Uniloc’s infringement theory, given that the PID used in Product Activation is likewise generated by the user’s computer. Rather, the Federal Circuit made clear that it was agreeing with Microsoft’s position on this point, which was that “information *about* the computer hardware” was not information associated with a licensee. *See id.* at 342-43 (emphasis added). Prof. Hellman testified that R is generated by the user’s computer. [*See* Trial Tr. Day 7, 45:10-

46:2] The random number R is not in any sense information *about* the computer that generates it, just as a Product Key and PID cannot be considered information about the respective computers that generate them. This is not a sufficient evidentiary basis for a jury to find that R is “platform-related” information. Thus if the accused PID is associated with a licensee, Hellman’s random number R is also associated with a licensee.<sup>14</sup>

Prof. Hellman also described the output *A* of his one-way hash functions, which his patent discloses can be 158 bits long. (*Id.* at 162:10-163:13.) The outputs of the one-way hash functions in Product Activation are similar, either 128 bits (MD5) or 160 bits (SHA-1). [Trial Tr. Day 7, 165:18-166:3] In short, the Hellman patent discloses inputting various items of information, including a unique value SK that can be derived from the user’s name and a non-repeating value R, into a one-way hash function to generate a 158-bit output, as explained by Prof. Hellman as he marked up a copy of the ‘216 patent:



<sup>14</sup> Moreover, a buyer of a Microsoft product receives a Product Key that is random to her, and the PID includes a random element, as discussed above.

[Ex. P-9] The parallels to the accused aspect of Microsoft's Product Activation are striking. Indeed, Hellman's patent expressly discloses that R is associated with both the user's name *and* his or her credit card number or other billing information, all of which are sent to the software vendor as part of the same authorization request [Hellman DX S-3 at 5:57-6:2], in the same manner as the preferred embodiment of the '216 patent [PX 1 at 7:8-20]. Given this, the value R is far more "associated with the licensee" than anything in Product Activation, including the Product Key. Hellman's patented system is thus if anything closer to claim 19 than Product Activation. On Uniloc's theory of infringement, the outputs of Hellman's one-way hash functions are therefore likewise uniquely associated with a licensee.

Uniloc's arguments that Hellman does not disclose a licensee unique ID are not only contrary to Uniloc's infringement contentions but also contrary to this Court's and the Federal Circuit's claim constructions. At trial, Mr. Klausner argued that the random number R in Hellman is not unique because it "might be repeated at a certain – in a certain way, even though the probability is small." [Trial Tr. Day 4, 11:7-12:14, 23:11-13]

However, this Court, at Uniloc's urging, *rejected* the construction of "unique" as "one of a kind," holding that "[t]o construe the word unique to mean no possibility of duplication would simply be inconsistent with the specification." [D.I. No. 145, Decision and Order on Claim Construction, at 12] Uniloc and Mr. Klausner are ignoring that aspect of the Court's construction now that it turns out to be inconvenient on the issue of invalidity. The distinction that Mr. Klausner attempted to draw is precisely the distinction rejected by the Court. Hellman's R is, if anything, more "unique" than Microsoft's accused PID, since there are at least a quadrillion different choices for R, a thousand times more than the number of choices for the Product-Key-derived portion of the PID. [See Trial Tr. Day 4, 23:16-24:3, 84:19-86:2] Even

beyond this one-in-a-quadrillion level of uniqueness, the Hellman patent expressly states that R can be designed to be non-repeating. [Ex. S-3 at 5:67]

The evidence thus compels the conclusion that, applying Uniloc's infringement allegations, every element of claim 19 is disclosed in Hellman, and Hellman therefore anticipates claim 19 as a matter of law.

**2. Properly Applied, Claim 19 Is Obvious In Light of Hellman, Alone Or In Combination With Wolfe.**

Properly applied, claim 19 is obvious in light of Hellman alone, or alternatively in combination with Wolfe, because "the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains." *See* 35 U.S.C. § 103.

Obviousness is ultimately a question of law for the Court. *KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1745-46 (2007). That legal determination rests on three primary factual considerations: (1) "the scope and content of the prior art," (2) any "differences between the prior art and the claims at issue," and (3) "the level of ordinary skill in the pertinent art." *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 17 (1966).

Microsoft's evidence on these three primary considerations is unchallenged. Both the Hellman and Wolfe patents were established at trial as being within the scope of the relevant prior art. [See Trial Tr. Day 6, 136:11-137:3; Trial Tr. Day 7, 177:8-22] Uniloc did not rebut any of Microsoft's evidence with respect to what Hellman and Wolfe disclose. Nor did Uniloc contest Microsoft's definition of the person of ordinary skill in the art. In particular, such a person was relatively knowledgeable, with two years of experience "working in computer

security applications,” and was aware of both one-way hash functions and summation. [Trial Tr. Day 7, 173:5-174:12]

Against this factual background, the invention of claim 19 would have been obvious in light of Hellman alone. *See SIBIA Neurosciences, Inc. v. Cadus Pharmaceutical Corp.*, 225 F.3d 1349, 1356 (Fed. Cir. 2000) (“In appropriate circumstances, a single prior art reference can render a claim obvious.”). [See Trial Tr. Day 7, 171:22-172:6] On the undisputed facts, the sole difference between Hellman and the claimed invention as properly construed is Hellman’s use of one-way hash functions where the claimed invention uses summation. The substitution of the more primitive and much less secure summation algorithm for a one-way hash function would have been well within the knowledge of one of ordinary skill in the art. [See Trial Tr. Day 7, 173:21-174:12] Uniloc has not presented any evidence that there was any innovation in, or value to, the use of a summation algorithm – to the contrary, the evidence shows that it would have been a significant step backward. [See *id.* at 169:24-171:21] Uniloc is not entitled to a patent claim for making the prior art worse. *See In re Gurley*, 27 F.3d 551, 552-53 (Fed. Cir. 1994) (finding the use of a particular material for making circuit boards to be obvious where the use of the material was disclosed in the prior art, but characterized as “inferior” to other materials); *see also Asyst Technologies, Inc. v. Emtrak, Inc.*, 544 F.3d 1310, 1315-16 (Fed. Cir. 2008) (finding it obvious to substitute a multiplexer for a bus in a computer system where the relative “advantages and disadvantages of using a multiplexer . . . were well understood at the time of the [patent-in-suit] application”).

The undisputed evidence plainly shows that hashing functions and summation algorithms were both well-known in the field at the time of the ‘216 patent application. [See Trial Tr. Day 7, 173:21-174:12] Indeed, Uniloc’s own Mr. Klausner stated in *voir dire* that “all of the hashing

algorithms have been known forever to be summaries, to be summations.” [Trial Tr. Day 2, 72:2-3] While Microsoft of course disputes this, and while Uniloc was of course prohibited from having Mr. Klausner offer this opinion, it is an admission that is nonetheless binding on Uniloc with regard to the invalidity of claim 19. *See Evans*, 125 F.3d at 1451. In short, on the undisputed record, the use of summation would have been no “more than the predictable use of [a] prior art element[] according to [its] established functions.” *KSR*, 127 S. Ct. at 1740; *see also Muniauction, Inc. v. Thomson Corp.*, 532 F.3d 1318, 1325-27 (Fed. Cir. 2008). Similarly, it would have been well within the knowledge and skill of one of ordinary skill in the art to substitute a simpler, less secure function for a more secure one. *See KSR*, 127 S. Ct. at 1740 (“[I]f a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill.”).

The record also compels a finding of obviousness in light of Hellman in combination with Wolfe. Prof. Wallach testified extensively, without any rebuttal from Uniloc, about the structure of the system disclosed in the Wolfe prior art, including its use of matching permission codes derived from a hardware identifier using the same algorithms both locally and remotely, which algorithm uses only addition and multiplication. [Trial Tr. Day 7, 180:19-184:11; *see generally* Exs. Q-1 (Wolfe patent), T-9 (slides DDX-77 through DDX-86, used by Prof. Wallach in explaining the Wolfe patent)] Thus, one of ordinary skill in the art would have found in Wolfe an explicit use of primitive summation algorithms, rather than one-way hash functions, to compute software unlocking codes, again compelling the conclusion that such a substitution would have been obvious.

In addition to the three primary *Graham* factors noted above, secondary considerations of non-obviousness, such as commercial success due to the merits of the claimed invention, a long-felt need for the solution provided by the claimed invention, and copying of the claimed invention by others, are, when relevant, factors in an obviousness determination. *See Graham*, 383 U.S. at 17-18. Microsoft, however, has made a showing under the primary indicators of obviousness, and “a strong prima facie obviousness showing may stand even in the face of considerable evidence of secondary considerations.” *Rothman v. Target Corp.*, 556 F.3d 1310, 1322 (Fed. Cir. 2009).

In any event, Uniloc bears the burden on secondary considerations, and presented no evidence from which a jury could have found that any alleged secondary considerations tended to show non-obviousness. In order to be relevant, there must be a nexus between any alleged evidence of secondary considerations and the claimed invention. *See Ormco Corp. v. Align Technology, Inc.*, 463 F.3d 1299, 1311-12 (Fed. Cir. 2006). It is Uniloc’s burden to prove such a nexus. *See Demaco Corp. v. F. Von Langsdorff Licensing Ltd.*, 851 F.2d 1387, 1392 (Fed. Cir. 1988).

Uniloc offered no evidence whatsoever to tie any alleged secondary considerations to the subject of claim 19, and indeed the evidence was to the contrary. Uniloc did not even attempt to show that any of its own products have been commercially successful, and instead focused only on the accused Microsoft products. The suggestion that the success of the Windows and Office products, with their thousands of features, is somehow due to the use of license hashing in Product Activation is absurd on its face. Uniloc’s own damages expert, Mr. Gemini, acknowledged that Product Activation is not the source of the commercial success of Microsoft’s products. [See Trial Tr. Day 5, 160:14-19] The fact that there is substantial consumer demand

for Microsoft's products thus has no bearing on the non-obviousness of Uniloc's claimed invention. *See, e.g., Friskit, Inc. v. Real Networks, Inc.*, 2009 WL 59182, at \*6 (Fed. Cir. Jan. 12, 2009) (unpublished) (“[The patentee's] inability to relate the success of [the accused infringer's] products to the [alleged novel aspect of its claimed invention] is fatal to its claim that the commercial success of the invention is evidence of nonobviousness.”).

Similarly, Uniloc presented no evidence of any long-felt need for the *specific* solution alleged to infringe Uniloc's claims, as opposed to a *general* need for anti-piracy solutions in the industry. Uniloc's allegation that claim 19 satisfied such a long-felt need is simply an attempt to take credit for anti-piracy technologies that Hellman and others had long ago invented, precisely what the nexus requirement precludes. *See Ormco*, 463 F.3d at 1312.

Finally, as explained above, Uniloc presented neither sufficient evidence of any copying by Microsoft nor sufficient evidence that anything allegedly copied actually embodied the claimed invention. This too is thus not a relevant secondary consideration of non-obviousness. *See, e.g., Friskit*, 2009 WL 59182, at \*6 (no nexus where the patentee “failed to introduce sufficient evidence to show that the copied technology fell within the scope of the asserted claims”).

Secondary considerations thus have no role in the obviousness determination in this case, and the evidence at trial compels the conclusion that claim 19 is invalid as obvious as a matter of law.<sup>15</sup>

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<sup>15</sup> Although Microsoft proved invalidity in light of Hellman (or Hellman and Wolfe) by clear and convincing evidence, Hellman was not considered by the PTO, and thus less than clear and convincing evidence is required to satisfy Microsoft's burden. As the First Circuit has explained, the presumption of validity is “eroded” when the PTO has not considered the asserted reference and “it follows that while [the] burden still remain[s] on the challenger, it would, as a practical matter, be less than the burden embodied in the ‘clear and convincing’ standard.” *Futorian Mfg. Corp. v. Dual Mfg. & Eng'g, Inc.*, 528 F.2d 941, 943 (1st Cir. 1976). While subsequent Federal Circuit cases disagree with *Futorian*'s approach, those decisions have been undermined by *KSR*, which found it “appropriate to note” that the rationale underlying the Federal Circuit's deferential clear-and-convincing standard – “that the PTO, in its expertise, has approved the claim” – is “much diminished” when a defense of invalidity rests on

### 3. Claim 19 Is Indefinite.

Throughout this case, and especially at trial, Uniloc has taken multiple, inconsistent positions on the meaning of the claim term “unique,” including (as noted above) positions on uniqueness in the prior art that cannot be reconciled with its positions on infringement. Uniloc’s evasiveness is rooted in the ‘216 patent’s complete lack of guidance as to how to determine “uniqueness.” This is fundamentally unfair and contrary to the requirement of definiteness in claims. Microsoft is therefore entitled to judgment as a matter of law that claim 19 of the ‘216 patent is invalid as indefinite.

Patent claims must “particularly point[] out and distinctly claim[] the subject matter which the applicant regards as his invention.” 35 U.S.C. § 112, ¶ 2. This definiteness requirement serves the important goal of ensuring that the public has fair notice of what the patentee claims as his own. *See Halliburton Energy Services, Inc. v. M-I LLC*, 514 F.3d 1244, 1249 (Fed. Cir. 2008). “The statutory requirement of particularity and distinctness in claims is met only when they clearly distinguish what is claimed from what went before in the art and clearly circumscribe what is foreclosed from future enterprise.” *United Carbon Co. v. Binney & Smith Co.*, 317 U.S. 228, 236 (1942). A finding of indefiniteness is warranted when “an accused infringer shows by clear and convincing evidence that a skilled artisan could not discern the boundaries of the claim based on the claim language, the specification, and the prosecution history, as well as her knowledge of the relevant art area.” *Halliburton*, 514 F.3d at 1249-50.

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evidence that the PTO never considered. 127 S. Ct. at 1745. Therefore, Microsoft’s motion for judgment as a matter of law on invalidity defense should be judged under the preponderance standard. Accordingly, were this Court to find that Microsoft’s showing of invalidity was not sufficiently “clear and convincing” as a matter of law, it should nonetheless grant Microsoft JMOL because Microsoft showed that invalidity is more likely than not. At minimum, Microsoft is entitled to a new trial on this issue. *See, e.g., Baumstimler v. Rankin*, 677 F.2d 1061, 1066 (5th Cir. 1982) (remanding for a new trial under the preponderance standard where the asserted reference was not considered by the PTO).

Indefiniteness is a question of law for the Court. *Datamize, LLC v. Plumtree Software, Inc.*, 417 F.3d 1342, 1347 (Fed. Cir. 2005).

In this case, although the Court has stated what “unique” does *not* mean (namely, it is not limited to “one of a kind”), the Court has not been able to say precisely what it *does* mean. In its claim construction order, the Court stated only that “[t]he ‘216 patent clearly contemplates that the licensee unique ID will consist of varying levels of uniqueness that are wholly dependent upon the inputs used to formulate the licensee unique ID.’”<sup>16</sup> [See D.I. No. 145, Decision and Order on Claim Construction, at 11] In its instructions to the jury, the Court noted that it could not give “a precise definition” of “unique.” [Trial Tr. Day 10, 137:11-16] While the Court went on to explain that “unique in the context of this case should be sufficient to provide to the vendor or software maker some sufficiently distinguishing identifier of the licensee,” it did not explain what would make an identifier “sufficiently distinguishing.” [See *id.*]

Uniloc has taken full advantage of this ambiguity, by shifting between narrow and broad applications of uniqueness in its inconsistent treatment of the infringement and validity issues. On the one hand, in describing the MD5 hash algorithm used in Product Activation, Mr. Klausner opined that “unlike a regular simple checksum, the MD5 creates a unique output.” [Trial Tr. Day 3, 31:6-7] Mr. Klausner went on to explain:

Q. I mean, you get a smaller number?

A. Whatever is put in is digested or shortened and it is summarized to a number that’s no bigger than 128 zeros and ones.

Now, 128 zeros and ones is actually a very big number. I don’t know if you recall the math in school, but if you take 128 different combinations of zeros and ones, you can make this many numbers and

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<sup>16</sup> On appeal, the Federal Circuit acknowledged these statements and noted that “[t]here is no dispute over the district court’s construction of ‘unique,’ with which we agree.” *Uniloc USA, Inc. v. Microsoft Corp.*, 290 Fed. Appx. 337, 343 n.3 (Fed. Cir. 2008). But like this Court, the Federal Circuit did not state affirmatively what “unique” means.

two-to-the-128th is more people than there are on our planet, and probably more atoms than there are in this courtroom. It's a huge number, and, therefore, the output of this algorithm is unique for its input. Give it something unique, you get something unique.

[*Id.* at 35:9-21] On the other hand, Mr. Klausner testified that the random number R disclosed in the Hellman prior art was not “unique,” even though he acknowledged that there was only a one in a quadrillion ( $10^{15}$ ) chance of repeating an R value a second time:

Q. Mr. Klausner, using your own definition that, if you've got enough numbers to give a separate number to everybody on the face of the planet, Professor Hellman's random number is unique, right?

A. No. I disagree.

Q. Sir, it's far larger than the number of people on the face on the earth, true?

A. It is. However, two people, according to Professor Hellman, can have the same number. And it's not true for PIDs.

Q. And it is a one in a quadrillion chance that two people will have the same R, true?

A. That is true.

[Trial Tr. Day 4, 23:16-24:3]

Mr. Klausner also testified that the PID in Product Activation is “unique” because it is derived from a unique Product Key. [Trial Tr. Day 3, 24:9-25:7] It is undisputed that the portion of the PID derived from the Product Key is only 12 digits long. [Trial Tr. Day 4, 84:19-86:2] There are thus only  $10^{12}$ , or a trillion, different possibilities for the Product Key-derived portion of the PID, a thousand times smaller than the number of distinct random numbers R in the example given in Hellman.

There is no meaningful way to distinguish between the number of possible outputs to the MD5 hash algorithm or the number of PIDs on the one hand, and the number of possible choices of the random number R in the Hellman prior art, on the other. Uniloc has never suggested any principled distinction. More importantly, nowhere does the patent teach how to distinguish

between or among the various numbers that might be considered “unique” for the purposes of the invention. While the patent might contemplate that uniqueness is a matter of degree, it provides no guidance on how to measure whether a number is sufficiently “unique.”

The Federal Circuit faced a similar situation in *Halliburton*, in which the court found the term “fragile gel” to be indefinite, because one skilled in the art would not be able to determine from the specification when a gel was sufficiently “fragile” within the meaning of the claim. 514 F.3d at 1251. In that case, the Court found that the specification disclosed no method of measuring fragileness that would distinguish the prior art, and that the patentee’s “failure to distinguish the fragileness of the [claimed] invention from the close prior art . . . [was] fatal.” *Id.* at 1253.

How is Microsoft, or any other competitor, supposed to determine what is covered by claim 19, and what is not? Patents should not be traps, where only through the great expense and exposure of trial can one learn which side of the line they are on. A patent is supposed to draw those lines, and draw them clearly enough so that one of skill in the art can understand them. The ‘216 patent does not, and even Uniloc’s own technical expert cannot say where the line is. The ‘216 patent specification discloses no method of measuring uniqueness, and certainly none that would distinguish the prior art as Uniloc has sought to do in this case. If one in a quadrillion is not sufficiently unique, then is one in a quadrillion, quadrillion ( $10^{30}$ )? One of ordinary skill in the art would have no way of knowing from the ‘216 patent disclosure, and would have no way of knowing what length numbers might infringe and which would not. That lack of notice to the public is precisely what the indefiniteness requirement was designed to prevent. The lack of notice here means that the term “unique,” and thus also claim 19, is fatally indefinite.

**D. No Reasonable Jury, Applying the Correct Legal Standard, Could Have Awarded \$388 Million in Damages.**

Uniloc presented a damages theory based on two numbers, neither of which has any basis in the facts of this case. First, Mr. Gemini, Uniloc's damages expert, used a single sentence from a single document as the basis to adopt \$10 per activation as the isolated value of Product Activation. He pursued this theory even though the document on which he relied makes no mention of Product Activation, and in fact predated the release of the accused products by several months. Uniloc also presented no evidence to show that this \$10 figure in fact represents the isolated value of Product Activation, and the only relevant evidence is to the contrary. Second, Mr. Gemini applied a generic 25% rate to that amount to arrive at a reasonable royalty of \$2.50 per activation. That rate bears no relation to the facts of this case, as either a starting point or an ending point. Therefore, neither the \$10 amount nor the 25% rate has any evidentiary basis in the facts of this case. Since neither is supportable, Mr. Gemini's analysis fails, and cannot be relied upon in support of the jury verdict.

Mr. Gemini also provided an alternative calculation in the form of a "check" to determine whether his estimated royalty of \$565 million was reasonable. Far from validating his conclusion, this "check" ran afoul of the Entire Market Value rule, not to mention Uniloc's own pre-trial representations and the Court's rulings. Therefore, because both Mr. Gemini's initial analysis and his subsequent "check" are insufficient as a matter of law to support Uniloc's damages claim, Microsoft is entitled to judgment as a matter of law pursuant to Rule 50 that Uniloc may not recover damages on the basis of that theory, leaving Mr. Napper's approach as the only one which the jury should have been allowed to consider in deliberating on damages. Mr. Napper's opinion was that the most likely result of a hypothetical negotiation would have been a single lump sum payment of between \$3 and \$7 million.

In addition, it is apparent from the size of the jury's \$388 million award that it is at least partially based on Mr. Gemini's analysis, rather than Mr. Napper's. Because Mr. Gemini's analysis lacks evidentiary support, the verdict should thus be set aside and a new trial ordered on damages pursuant to Rule 59(a), or, alternatively, the court should grant remittitur to reduce the amount of damages to \$7 million, which is the maximum amount that is supported by the record, or \$3.5 million if the Court determines that Uniloc is not entitled to recover for foreign activations, as discussed below.

### **1. Damages Law**

Uniloc seeks a reasonable royalty as a measure of damages in this case. Although a reasonable royalty analysis "necessarily involves an element of approximation and uncertainty, a trier of fact must have some factual basis for a determination of a reasonable royalty. Any rate determined by the trier of fact must be supported by relevant evidence in the record." *Unisplay S.A. v. American Elec. Sign Co.*, 69 F.3d 512, 517 (Fed. Cir. 1995).

On a "running royalty" theory of patent damages, such as the theory espoused by Mr. Gemini, the legal rule determining the appropriate base in a patent infringement case is well-established. The Entire Market Value rule provides that a patent owner may only use the "entire market value" of the accused product as the base for calculating a running royalty only if the accused infringing aspect of the product is the basis for consumer demand for that product. *See Imonex Servs., Inc. v. W.H. Munzprufer Dietmar Trenner GMBH*, 408 F.3d 1374, 1380 (Fed. Cir. 2005); *Cornell Univ. v. Hewlett-Packard Co.*, 2008 WL 2222189, at \*2 (N.D.N.Y. May 27, 2008) (Rader, J.). If the specific aspect that is accused of infringement is not why customers buy the product, then the patentee cannot use the entire value of the product as the base for calculating running royalty damages. It is instead incumbent upon the patent owner to establish what portion of the value of the product should be allocated to the specific accused element. *See*

*Blake v. Robertson*, 94 U.S. 728, 733-734 (1876) (affirming nominal damages where patentee failed to meet its burden to establish portion of damages attributable to infringing feature of larger product).

## **2. Mr. Gemini's Analysis Violates the Entire Market Value Rule**

Before trial, in response to Microsoft's *Daubert* motion, Uniloc represented that it would not rely on the Entire Market Value rule for damages. [Uniloc Opp. at 12] The Court also instructed the jury that Uniloc could not pursue a damages theory based on the entire market value of the accused products. [Trial Tr., Day 10, 161-62]

Nonetheless, Mr. Gemini's self-styled "check" was in substance a back-door argument that damages should be based on the entire market value of the accused products. [Trial Tr. Day 5, 72:9-10] In this way, Uniloc violated not only the Entire Market Value rule, but also its pre-trial representation to the Court.

Mr. Gemini began his "check" by estimating the total revenue attributable to the accused products during the period of damages, which he calculated to be \$19.28 billion. [Trial Tr. Day 5, 72:19-73:11] According to Mr. Gemini's testimony, this amount represents the entire market value of the products accused of infringement. [Trial Tr. Day 5, 165:24-166:4] That is, the \$19.27 billion amount is not isolated to that part of the value of the accused products that is attributable to Product Activation. Nevertheless, Mr. Gemini then compared his \$564 million damages estimate to this entire market value amount, to arrive at a royalty of 2.9%. [Trial Tr. Day 5, 74:5-11] Because this 2.9% rate was below what he considered to be the software industry average (which itself was unexplained and inapplicable), he concluded that his "check" confirmed the reasonableness of his \$2.50 per activation royalty. [Trial Tr. Day 5, 72:14-19]

With the door now opened to the entire market value through Mr. Gemini's "check," Uniloc then vigorously and improperly embraced the entire market value theory on which it

rested, both in Mr. Napper's cross-examination and in closing argument. During Mr. Napper's cross-examination, Uniloc attempted to call into question the reasonableness of Mr. Napper's royalty by repeatedly invoking the entire market value of the accused products. [See Trial Tr. Day 8, 179:8-21, 243:3-244:8; Trial Tr. Day 9, 22:2-14] Then, in closing, Uniloc argued that a \$7 million royalty was in fact a 0.00003% royalty, and that such amount was "nuts." [Trial Tr. Day 10, 112:14-19] According to Uniloc, that 0.00003% royalty figure was calculated by dividing Mr. Napper's proposed \$7 million royalty by \$22 billion, *i.e.*, the entire market value of the accused products sold during the damages period. [*Id.*]

By comparing his damages figure to the entire market value of the accused products, Mr. Gemini's "check" impermissibly invoked the Entire Market Value rule. So too did Mr. Hayes' critique of Mr. Napper's analysis. Mr. Gemini himself testified that Product Activation is *not* a basis for customer demand for the accused products. [Trial Tr. Day 5, 166:5-11] Yet one of the prerequisites to the application of the Entire Market Value rule is that the patented component is "the basis for customer demand" or "substantially create[s] the value of the component parts" *Rite-Hite Corp. v. Kelley Co.*, 56 F.3d 1538, 1549 (Fed. Cir. 1995). Because it is undisputed that Product Activation is not a basis for customer demand of the accused products, the analysis performed in Mr. Gemini's "check" is inappropriate as a matter of law, and Uniloc's reliance on the entire market value of the accused Office and Windows products as a critique of Mr. Napper's opinion, both in cross-examination and during closing argument, was not only improper and unsupportable by the record evidence, but was in plain violation of Uniloc's express pre-trial representations. Given all of this, the jury's \$388 million award cannot stand.<sup>17</sup>

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<sup>17</sup> Microsoft also preserves its position that denial of its *Daubert* challenge to Mr. Gemini was prejudicial error that entitles Microsoft to a new trial.

**3. Mr. Gemini's Analysis Has No Evidentiary Basis and Is Not Rooted in the Facts of this Case**

**(a) \$10 Per Activation**

Mr. Gemini adopted a \$10 per-activation value of Product Activation as the appropriate starting point for his royalty rate calculation. [Trial Tr. Day 5, 61:25-62:3] There is no dispute that the source of this number is a single sentence towards the end of an internal Microsoft memo regarding Product Identification numbers, or "PIDs," that was originally written in 1999 and revised in 2000 – the year before the accused products were even sold. [Trial Tr. Day 5, 91:2-5; PX-261 at 1] Uniloc has presented no evidence to establish that this single sentence – on which Mr. Gemini's entire damages analysis relies – in fact represents the isolated value of Product Activation.

It is undisputed that the document was written by the Product Support group (which provides customer service and support) to explain various changes that were made to the PID, and that PIDs pre-date Product Activation. [PX-261 at 4; Trial Tr. Day 9, 48:1-4, 49:17-21] It is also undisputed that PIDs and Product Keys, both of which are mentioned in the paragraph on which Mr. Gemini's analysis relies, have other uses outside of Product Activation, many of which are listed in the document itself. [Trial Tr. Day 5, 101:16-19; PX-261 at 6-9, 26] In fact, the primary use of PIDs within the Product Support group, which authored this document, was to more effectively manage and track the customer support Microsoft provides. [PX-261 at 6; Trial Tr. Day 9, 48:17-22]

The sentence on which Mr. Gemini relies is found in a portion of the document titled "Security." [PX-261 at 25] That section serves as a brief reminder to the reader that Product Keys should be treated with care, for the simple reason that they permit anyone who gains

possession of them to *install* Microsoft's software products, which are worth from \$10 to \$10,000. That section, which includes only a single paragraph, reads in its entirety:

Product Keys are valuable for two major reasons. First, since Product Keys can be used to install a product and create a valid Product ID, you can associate a monetary value to them. An appraisal process found that a Product Key is worth anywhere between \$10 and \$10,000 depending on usage. Secondly, Product Keys contain short digital signature technology that Microsoft Research created. For these reasons, it is crucial that Product Keys are handled with maximum security.

[PX-261 at 25] The Product Activation technology that is accused in this case is not discussed in the paragraph on which Mr. Gemini relies, or anywhere in the document. Nor could it be, because as Mr. Gemini admits, the document was last modified before the accused products were launched. [Trial Tr. Day 5, 89:20-23; 90:6-9] Nor does the paragraph mention any of the pilot programs that preceded Product Activation, including the "License Verification Program" or "LVP", even though other portions of the document – but not the paragraph relied on by Mr. Gemini – refer to LVP. [PX -261 at 8]

Since the paragraph in question does not refer to Product Activation (or any Product Activation precursor) at all, it likewise cannot be read to imply a value for the use of the product key or the product ID as used in Product Activation.

Uniloc has attempted to create a connection between this paragraph and the isolated value of Product Activation through the use of other documents that, according to Uniloc, describe a general connection between PID 3.0 and Product Activation. For example, Mr. Gemini testified that he relied on a Microsoft document titled "Product Activation Implementation Plan," which was last updated in December 2000. [Trial Tr. Day 5, 64:1-4; PX-434] According to Mr. Gemini, because this document states that "Product Activation is based on an extension of Microsoft's Product Identification (Product ID or PID) 3.0 technology," it supports his reliance on the \$10 figure from the Product Support Services memo. [Trial Tr. Day 5, 64:14-25] Mr.

Gemini also says he relied on two documents showing that Product Activation represents an evolution of technology previously released in the License Verification Program, a pilot program that preceded Product Activation and which as noted above is mentioned elsewhere in the Product Support Services memo. [See, e.g., Trial Tr. Day 5, 174:12-25 (discussing PX- 238); Trial Tr. Day 5, 175:15-21 (discussing PX-90)]

The documents relied on by Mr. Gemini are not sufficient to make the factual connection required by his analysis, which depends on equating the value of a Product Key as described in the Product Support Services memo with the isolated value of Product Activation. The documents on which Mr. Gemini relies for support suggest only the most tenuous connection between Product Activation generally and PID 3.0. As to the specific question of the isolated value of Product Activation, it is undisputed that there is no evidence equating the value of a Product Key (or a PID) with the value of Product Activation. [Trial Tr. Day 5, 95:7-97:10] It is equally undisputed that PIDs pre-existed Product Activation, and that PIDs and product keys have uses unrelated to Product Activation. [Trial Tr. Day 9, at 48:1-4 (PID pre-dates Product Activation); Trial Tr. Day 5, 101:16-19 (product keys have uses unrelated to Product Activation); PX-261 at 6-9, 26 (same)]

The only testimony in the record from someone with personal knowledge of PX-261 confirms what simply reading the document suggests – it has no relationship to Product Activation at all. Veronica Richards, a program manager in the Product Support Services group, testified that her work as the PID program manager had nothing to do with Product Activation. [Trial Tr. Day 9, 47:2-4] Ms. Richards also testified that the paragraph on which Mr. Gemini relies does not place a value on Product Activation, or the Product Key or PID as used in Product Activation. [Trial Tr. Day 9, 52:14-24] Ms. Richards went on to explain that the \$10-\$10,000

figure was simply the range of values of all products sold by Microsoft at the time PID 3.0 was introduced. [Trial Tr. Day 9, 52:25-53:10]<sup>18</sup>

**(b) 25% “Rule of Thumb”**

Mr. Gemini’s 25% rate is similarly unsound and divorced from the facts of this case. According to Mr. Gemini’s own testimony, he is unaware of any case in which that rule was *adopted* as the method of calculating a royalty. [Trial Tr. Day 5, at 114] Brian Napper, Microsoft’s damages expert, testified that he himself has not used the 25% rule in any patent license negotiation in which he has participated, and that doing so “really doesn’t make sense.” [Trial Tr. Day 8, 140:13-21] Therefore, whatever utility the 25% “rule” might have in other cases where it was or might have been used as the starting point in the analysis, the evidence provided in *this case* does not support its use here, or Mr. Gemini’s conclusory statement that it is a “widely accepted rule.” [See Trial Tr. Day 5, 109:13] Moreover, even adopting the rule as a starting point, Mr. Gemini still fails to base his royalty rate on the real-world factors relating to the accused products and the parties in this case. During his testimony, Mr. Gemini merely parroted the *Georgia-Pacific* factors and generally recited evidence that may fall within the ambit of each factor. Critically, he never indicated the extent to which each factor might drive the royalty rate up or down from the 25% figure. *Cf. Bowling v. Hasbro, Inc.*, No. C.A. 05-229S, 2008 WL 717741, at \*6 (D.R.I. March 17, 2008) (“The fundamental defect in Lapidus’ report ... is [his] failure to connect the *Georgia-Pacific* factors to his ultimate conclusion as to the reasonable royalty rate that would have resulted from a hypothetical negotiation between these parties”). In fact, Mr. Gemini’s collection of evidence if anything shows that a number of

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<sup>18</sup> Mr. Gemini’s reliance on the \$10 amount from the Product Support Services memo also runs further afoul of the Entire Market Value rule. Based on the testimony of Veronica Richards, the \$10-\$10,000 range from that document is the range of entire market values of Microsoft products at the time that PID 3.0 was introduced. [Trial Tr. Day 8, at 52:25-53:10.] Uniloc has provided no additional evidence to suggest an alternative source for that \$10-\$10,000 range. Accordingly, Mr. Gemini’s \$2.50 royalty, too, violates the Entire Market Value rule.

*Georgia-Pacific* factors indicate that a lower royalty rate would be appropriate. [See Trial Tr. Day 5, 35:13-22 (factor 3 – any license would be non-exclusive and therefore favor Microsoft); 127:10-14 (factor 2 – Microsoft licenses patents generally for lump sums); 131:10-25 (factor 4 – Uniloc is willing to license the patent); 132:1-9 (factor 5 – Uniloc and Microsoft are not competitors); 132:23-133:14 (factor 6 – Microsoft has realized no additional conveyed sales because of Product Activation)] It is true Mr. Gemini also testified that certain *Georgia-Pacific* factors favored Uniloc as well. But again he provided no indication as to how each factor, or even the group collectively, affected the 25% starting point. Instead, we are left with the remarkable and highly improbable coincidence that, taking all 15 factors into account, Mr. Gemini ended up precisely where he started – 25%. He then applied that 25% to the \$10 amount from the Product Support Memo to come up with a remarkably tidy \$2.50/activation figure. [Trial Tr. Day 5, 109:2-7] This is not analysis. It is hand-waving. It is evident that Mr. Gemini used the 25% “rule” as both a starting and ending point for his analysis, and the Court should reject Mr. Gemini’s analysis and order a new trial on this independent basis.

#### **4. The Damages Award Is Grossly Excessive**

A jury’s award of damages cannot be sustained where ““the amount is grossly excessive or monstrous, clearly not supported by the evidence, or based only on speculation or guesswork.”” See *DSU Med. Corp. v. JMS Co.*, 471 F.3d 1293, 1309 (Fed. Cir. 2006) (*en banc*). The trial court’s discretion to award a new trial “includes overturning verdicts for excessiveness and ordering a new trial without qualification, or conditioned on the verdict winner’s refusal to agree to a reduction (*remittitur*).” *Gasperini v. Ctr. for Humanities*, 518 U.S. 415, 433 (U.S. 1996). “It is indeed Hornbook law that a most usual ground for a Rule 59 motion is that the damages are excessive.” *Id.* at 438, n.22 (internal citation omitted).

Here, the jury's award of \$388 million is grossly excessive. This is particularly so in light of the facts that:

- Microsoft had demonstrated to Uniloc that its copy protection product was utterly ineffective when Uniloc tried to sell it to Microsoft [*e.g.*, Trial Tr. Day 1 at 165, 216; Trial Tr., Day 7 at 96; Ex. E-7];
- Uniloc had failed in its efforts to market or license its technology and was struggling financially [*e.g.*, Trial Tr. Day 8 at 159, 172]; and
- the *entire value of Uniloc* (including its patent) had been calculated at just \$5 million [*e.g.*, Trial Tr. Day 8 at 159-60; Trial Tr. Day 9 at 11].

To the extent Uniloc responds that enormous damages are justified by enormous accused sales, that is just another improper application of the Entire Market Value rule. It should be rejected.

## **5. Remedy**

Because Uniloc's damages analysis is unreliable and unsupported by evidence, the jury's verdict, which relies on that analysis, cannot stand. *Cf. Meister v. Med. Eng'g Corp.*, 267 F.3d 1123, 1131-1132 (D.C. Cir. 2001) (affirming judgment as a matter of law based on finding that expert testimony failed to satisfy *Daubert* standard). The Court should grant Microsoft's motion for a new trial or alternatively grant remittitur of the damages amount to \$7 million (or \$3.5 million if Uniloc may not recover for foreign activations), which is the maximum amount that is supported by the record.

## **6. The Damages Award as a Matter of Law Improperly Includes Damages for Activations of Software Installed on Computers Outside the United States**

The '216 Patent is of course a United States patent, and as such is subject to geographical limitations on its enforcement. Those geographical limitations are expressly set forth in 35

U.S.C. § 271(a), the sole basis of Uniloc’s infringement claim, which makes liable for infringement any person who “without authority makes, uses, offers to sell, or sells any patented invention, *within the United States*.” 35 U.S.C. § 271(a) (emphasis added). Uniloc’s infringement theory is that each time a Microsoft Windows XP or Office XP customer anywhere in the world installs those products onto his or her computer and initiates Product Activation, *Microsoft* has used Uniloc’s claimed system “within the United States.” Regardless of where this occurs, as explained above this alleged usage is not by Microsoft alone, and so Uniloc has failed in its burden to show direct infringement by Microsoft anywhere in the world. Moreover, when Microsoft’s customers install Microsoft’s software products on non-U.S. computers, and then use those computers outside the U.S. to activate the software, that does not satisfy the statutory situs requirement, which is fundamental to the Patent Act. *See* 35 U.S.C. § 154(a)(1).

As a threshold matter of policy, the Supreme Court in *Microsoft Corp. v. AT&T Corp.* reiterated that U.S. patent laws must be construed to avoid unnecessary extraterritorial application; addressing difficult territoriality questions posed by new technologies is a job for Congress, not the courts. Specifically, there is a “presumption that United States law governs domestically but does not rule the world applies with particular force in patent law.” 550 U.S. at 454-55. This presumption against extraterritoriality “is embedded in the Patent Act itself,” *id.* (citing 35 U.S.C. § 154(a)(1)), which was ““not intended to operate beyond the limits of the United States,”” 550 U.S. at 455 (quoting *Brown v. Duchesne*, 19 How. 183, 195 (1857)).

As a principle of general application, the presumption against extraterritoriality provides that where a “statute’s language reasonably permits an interpretation consistent with” the tenet that Congress strains to avoid interference with other nations’ sovereignty, a court “should adopt it.” *F. Hoffman-LaRoche Ltd. v. Empagran S.A.*, 542 U.S. 155, 174 (2004). Applied to the

patent context, where foreign law may reach the alleged act of infringement, “the presumption tugs strongly against” a construction of U.S. patent law that reaches the foreign conduct. *AT&T*, 550 U.S. at 455. This is because foreign patent law often “embod[ies] different policy judgments about the relative rights of inventors, competitors, and the public in patented inventions.” *Id.*

Uniloc’s theory that a customer’s installation and use of Microsoft software protected by Product Activation outside the United States is a usage by Microsoft of the claimed system “within the United States” is not only an affront to the policy and presumption against extraterritoriality, but it ignores the very basis on which Uniloc sought and obtained its patent.

Boiled down, Uniloc’s litigation position is that the location of the user’s computer is irrelevant. Only the Clearinghouse location matters. But that is not what claim 19 says, and it is not what Uniloc argued to the Patent Office in order to get claim 19. Claim 19 is to a registration system with only three elements: (1) a remote licensee unique ID generating means, (2) a local licensee unique ID generating means, and (3) a mode switching means. In Product Activation, the second and third of those three elements, as alleged by Uniloc, reside entirely on the user’s local computer. Indeed, it is the alleged mode switching means installed on the user’s computer that ultimately controls whether the software is activated on that computer. Mr. Klausner testified that the piece of code he referred to as the comparison program code ultimately determines whether the user is able to activate the product, and therefore in Uniloc’s view to *fully* use it after the conclusion of the grace period. [See Trial Tr. Day 3, 41:20-42:1, 190:18-22] Mr. Klausner conceded that this code is located on the user’s computer, and when the user and his computer are located abroad, this critical comparison process thus occurs outside of the United States. [Trial Tr. Day 3, 192:1-8]

Moreover, during prosecution, Uniloc adamantly underscored the balanced and matched nature of its claimed system, including to overcome the prior art. It was the fact that the same algorithm was present and used on both the local and remote computers that Uniloc touted as its key point of novelty:

In response, the Applicant submits herewith redrafted claims, the main claims of which include, broadly, the following two distinguishing limitations:

- (a) The "Licensee Unique ID" on which the registration system relies for matching for verification purposes is generated locally, and
- (b) The algorithm used to generate locally the "Licensee Unique ID" is replicated remotely for the purposes of remote generation of a separate "Licensee Unique ID" for matching purposes.

[Ex. D-8, July 26, 1995 Amendment In Response to March 30, 1995 Office Action at 6]

It is submitted that this local generation of the unique identifying feature for each copy of the software to be protected is one distinguishing feature of the present invention. Grundy does not disclose or suggest this feature or manner or operation. Furthermore, there is insufficient disclosure in Grundy to determine precisely what data is relied upon or checked in order to determine whether an "Authorization Code" is "valid" or not; in short, it is unclear from the disclosure of Grundy as to precisely what the enabling data or enabling data comparison is which permits the protected software to run in its second mode.

The fact that the algorithm which generates the unique ID generating means of the present invention is replicated at a remote location permits the following two features of the present invention not to be found in Grundy:

[*Id.* at 8]

By contrast, the invention of the present application does not require any decryption key to pass from the second platform (the remote location) to the first platform (the local location) because the same algorithm is used at both locations. This feature is now clearly included in all proposed main claims, and, it is submitted, patentably distinguishes the present invention over Grundy.

[*Id.* at 9]

Uniloc cannot now rewrite this history. Having clearly, unequivocally, and repeatedly stated that both the local and remote computers are critical to its claimed system, it had no basis to argue, and the jury had no basis to find, that in effect two-thirds of the claimed system can be ignored. “The use of a claimed system under section 271(a) is the place at which the system *as a whole is put into service, i.e.*, the place where control of the system is exercised and beneficial use of the system obtained.” *NTP, Inc. v. Research In Motion, Ltd.*, 418 F.3d 1282, 1317 (Fed. Cir. 2005) (emphasis added). This legal test echoes the fundamental principle, explained in *Deepsouth*, 406 U.S. at 528, that “a patent on a combination is a patent on the assembled or functioning whole, not on the separate parts.” Similarly, a patent on a system is not a patent on the separate parts of that system. Therefore, consistent with *Deepsouth*, there can be no damages for the use of a patented system unless the entire system is used within the United States. The *only* exception to this rule is 35 U.S.C. § 271(f), which was enacted in response to *Deepsouth* and which was an issue in *AT&T* but is not an issue in this case. Any interpretation of *NTP* that requires a different conclusion is inconsistent with the Supreme Court’s holding in *Deepsouth*, and must be rejected.

*NTP* reached the opposite result on its facts, and presents in many respects the mirror image of this case. The patent owner there sought to recover for Blackberry usage within the United States, even though the Blackberry messages were routed through a central point in Canada called a “Relay.” *Id.* at 1290, 1313. While agreeing with the defendant RIM that the Relay “is necessary for the other components of the system to function properly,” the Court held that this fact misses the point: “[I]t fails to appreciate the way in which the claimed NTP system is actually used by RIM’s customers.” *Id.* at 1317. “When RIM’s United States customers send and receive messages by manipulating the handheld devices in their possession in the United

States, the location of the use of the communication system as a whole occurs in the United States.” *Id.* So, even though RIM’s Relay was technologically critical – it “control[led] the accused systems and was necessary for the other components to function properly” (*id.*) – the Court nonetheless affirmed the verdict that the system as a whole was put into use where the customers were located, in the United States. It was those U.S. customers, rather than the Canadian relay, that “controlled the transmission of the originated information and also benefited from such an exchange of information.” *Id.*

That Microsoft also garners benefits from Product Activation does not alter the situs analysis. RIM’s Relay conferred the *exact same benefit* on RIM as the Product Activation system does on Microsoft. As RIM explained to the Federal Circuit, in addition to routing e-mails, “[t]he Relay also controls access to the BlackBerry system by ignoring packets from unauthorized users.” [Appellant’s Brief in *NTP, Inc. v. Research in Motion*, 418 F.3d 1282 (Fed. Cir. 2005), 2003 WL 25283104, at \*43 (Nov. 26, 2003)] Just as Microsoft’s system enables Microsoft to block unauthorized software users, Blackberry’s Relay enables it to block unauthorized network users. The proper focus of the “beneficial use” inquiry is the immediate benefit to the users of a system, not an ultimate benefit to the entity operating a system. Thus, in *Decca Ltd. v. United States*, 544 F.2d 1070, 1081 (Ct. Cl. 1976), the beneficial use of a navigational system with broadcasting equipment located both within and outside of the United States occurred when and where the signals of that system were received and used by the ships or planes that used the signals to aid in navigation. Uniloc contends that the benefit of the accused system is a financial one, and because Microsoft is headquartered in the United States, the beneficial use of the system occurs there as well. [Trial Tr. Day 10, 45:18-25] But such a rule would result in a beneficial use occurring within the United States for every U.S. defendant.

This illogical result is plainly inconsistent with the result in *NTP*, a case in which the benefit of the system was found to have occurred within the United States even though the company employing the system was headquartered in Canada. *See NTP, Inc. v. Research In Motion*, 418 F.3d at 1289, 1317. Even more fundamentally, Uniloc's position is contrary to *Deepsouth*, which limited infringement to assembly of all elements in the United States despite the presence of a U.S. defendant.<sup>19</sup>

It was thus wholly improper on the undisputed record for Uniloc and the jury to ignore the location of the customer and focus solely on the location of the Clearinghouse. Just as it takes two to tango, it takes two computers for the accused Product Activation system to be formed and used, and Uniloc in its claims and to the Patent Office emphasized the importance of both halves of its claimed system. On the undisputed material factual record of how Product Activation operates, and the undisputed record of the prosecution history, the locations of both computers matter, and "the place at which the system as a whole is put into service" is the place where both computers are located. Therefore, as a matter of law, Uniloc can at most recover damages when both halves of the system are located within the United States. Uniloc conceded that at least 50% of the total number of activations is attributable to activations of computers outside of the United States. [Trial Tr. Day 5, 162:22-163:7] It was plain error for the jury to base, as it did, half of its damages award on Microsoft products that were installed and activated outside the United States. At a minimum, damages should be reduced by the \$194 million that the jury attributed to foreign uses. [Verdict at 5]

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<sup>19</sup> The public policy considerations of *NTP* are also reversed in this case. *NTP* involved the undesirable consequences of allowing a defendant to escape liability by moving part of its business (its servers) abroad. Yet on Uniloc's theory, Microsoft could avoid all liability, even for U.S. customers, by moving its activation servers abroad.

#### IV. CONCLUSION

For the reasons stated above, the Court should enter judgment as a matter of law in favor of Microsoft. In the alternative, it should order a new trial or grant remittitur of damages.

Dated: May 5, 2009

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**CERTIFICATE OF SERVICE**

On May 5, 2009, I caused a true and correct copy of **MEMORANDUM IN SUPPORT OF MICROSOFT CORPORATION'S MOTIONS FOR JUDGMENT AS A MATTER OF LAW, NEW TRIAL, OR REMITTITUR** thereof to be served via ECF on the following counsel of record:

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